24107
BID DOCUMENTS
2025-04-04

MRI ADDITION TO HCA GULF COAST HOSPITAL DIAGNOSTIC CENTER

HCA FLORIDA GULF COAST HOSPITAL
2024 STATE AVENUE
PANAMA CITY, FL 32405

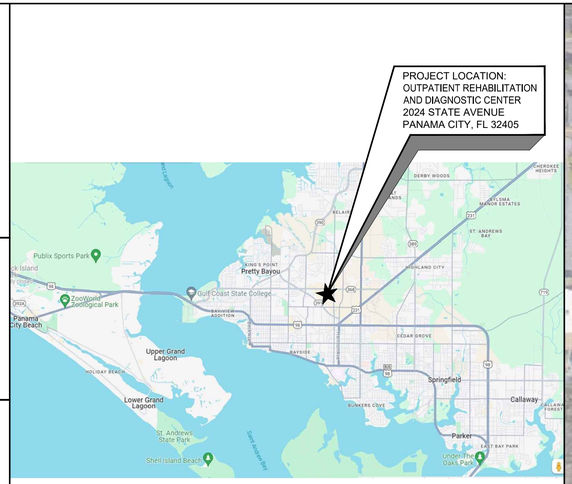
GENERAL INFORMATION

PROJECT NAME: DIAGNOSTICS MRI ADDITION
COUNTY: BAY COUNTY
BUILDING TYPE: Type IIB, SPRINKLERED
NUMBER OF FLOORS: 1

APPLICABLE CODES

2023 FLORIDA BUILDING CODE - EXISTING BUILDING, 8TH EDITION (FBC-EB)
2023 FLORIDA BUILDING CODE - BUILDING, 8th EDITION (FBC-B)
2023 FLORIDA BUILDING CODE - ACCESSIBILITY, 8th EDITION (FBC-A)
2023 FLORIDA BUILDING CODE - MECHANICAL, 8th EDITION (FBC-M)
2023 FLORIDA BUILDING CODE - PLUMBING, 8th EDITION (FBC-P)
2023 FLORIDA BUILDING CODE - ENERGY CONSERVATION, 8th EDITION (FBC-EC)
2023 FLORIDA FIRE PREVENTION CODE, 8th ED. *BASED ON NFPA 1& NFPA 101*
NATIONAL ELECTRICAL CODE, (NEC) 2023 EDITION

B2	CODE DATA
SCALE: NTS	.



B3	PROJECT LOCATION MAP
SCALE: NTS	.

A4	AREA PLAN
SCALE: NTS	.

ARCHITECT:	FIRE PROTECTION:	ELECTRICAL ENGINEER:	STRUCTURAL	CLIENT:
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A1	PROJECT TEAMS AND DISCIPLINE ALLOCATION
SCALE: NTS	.

GENERAL
G-001 COVER SHEET
G-002 ABBREVIATIONS, SYMBOLS & GENERAL NOTES
G-003 PARTITION TYPES

STRUCTURAL
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S-002 STRUCTURAL SPECIFICATIONS
S-003 STRUCTURAL SPECIFICATIONS
S-004 WIND TABLES AND SCHEDULES
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S-201 ROOF FRAMING PLAN
S-301 FOUNDATION DETAILS
S-302 FOUNDATION DETAILS
S-401 FRAMING DETAILS
S-501 COLD FORMED STEEL FRAMING

LIFE SAFETY
LS001 LIFE SAFETY PLAN

ARCHITECTURE
AD101 DEMOLITION PLAN
A-101 NEW WORK PLAN
A-111 REFLECTED CEILING PLAN, FINISH PLAN & FINISH SCHEDULE
A-121 ROOF PLAN
A-201 EXTERIOR ELEVATIONS
A-301 BUILDING SECTIONS
A-311 WALL SECTIONS
A-501 DETAILS
A-521 HEAD, SILL, & JAMB DETAILS
A-531 PHOTO DETAILS RAMP & STOOP
A-532 PHOTO DETAILS COLUMN, WEST SIDE
A-533 PHOTO DETAILS COLUMN, EAST SIDE
A-601 DOOR SCHEDULE, DOOR & WINDOW TYPES

FIRE PROTECTION
FP-101 FIRE PROTECTION PLAN

PLUMBING
P-001 PLUMBING LEGEND, SCHEDULE, NOTES, AND DETAILS
P-002 PLUMBING DETAILS & SPECIFICATIONS
P-101 PLUMBING FLOOR PLAN AND RISER DIAGRAMS

MECHANICAL
M-001 HVAC LEGEND, NOTES, AND SCHEDULES
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M-202 HVAC DETAILS
M-203 HVAC DETAILS

ELECTRICAL
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E-002 LEGEND AND NOTES
E-101 FLOOR PLAN - DEMO
E-201 FLOOR PLAN - POWER
E-301 FLOOR PLAN - MECH. POWER
E-401 FLOOR PLAN - FIRE ALARM
E-501 FLOOR PLAN - LIGHTING
E-601 ELECTRICAL DETAILS
E-602 ELECTRICAL DETAILS
E-603 ELECTRICAL DETAILS
E-604 ELECTRICAL DETAILS
E-605 LIGHTING CONTROLS & FIXTURE SCHEDULE
E-701 SINGLE LINE RISERS
E-801 ELECTRICAL SCHEDULES & TCC CURVES
T-001 LEGEND AND DETAILS
T-101 FLOOR PLAN - TELECOM
T-201 TELECOM DETAILS
T-202 TELECOM DETAILS

VENDOR DRAWINGS:

GE HEALTHCARE
C1 COVER SHEET
C2 DISCLAIMER - SITE READINESS
A1 GENERAL NOTES
A2 EQUIPMENT LAYOUT
A3 SECTION VIEWS
A4 ACOUSTIC - PROXIMITY LIMITS
A5 RF SHIELDING
A6 EQUIPMENT DETAILS (1)
A7 EQUIPMENT DETAILS (2)
A8 DELIVERY
S1 STRUCTURAL NOTES
S2 STRUCTURAL LAYOUT
S3 STRUCTURAL DETAILS
M1 MECHANICAL LAYOUT
M2 HVAC VENTING
M3 CHILLED WATER
M4 CRYOGENICS (1)
M5 CRYOGENICS (2)
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E7 POWER REQUIREMENTS - POWER DISTRIBUTION
E8 FACILITY SUPPLIED WIRING
E9 INTERCONNECTIONS

UNIVERSAL SHIELDING CORP.
US-01 COVER SHEET
US-02 STANDARD DRAWINGS
US-03 STANDARD DRAWINGS
US-04 STANDARD DRAWINGS
US-05 STANDARD DRAWINGS
US-06 STANDARD DRAWINGS

A4	SHEET INDEX
SCALE: NTS	.

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida Gulf Coast Hospital

REVISIONS:

No.	Description	Date

COVER SHEET

PROJECT NUMBER	24107
DATED	03/28/2025

G-001

24107
BID DOCUMENTS
2025-04-04

ALM	ALARM
AFF	ABOVE FINISHED FLOOR
ACT	ACOUSTICAL CEILING TILE
AWT	ACOUSTICAL WALL TREATMENT
ADJ	ADJUSTABLE
A/C	AIR CONDITION
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
ADA	AMERICANS WITH DISABILITIES ACT
ARCH	ARCHITECT
BALC	BALCONY
BR	BEDROOM
BM	BENCHMARK
BITUM	BITUMINOUS
BD	BOARD
BOT	BOTTOM
BRKT	BRACKET
BI FLD DR	BIFOLDING DOORS
BLDG.	BUILDING
CW	CASEMENT WINDOW
CBB	CEMENTITIOUS (BACKER) BOARD
CAB	CABINET
CPT	CARPET
CTR	CENTER
℄	CENTER LINE
C/C	CENTER TO CENTER
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
CRMF	COLD FORMED METAL FRAMING
CR	CLOSET ROD
CH	COAT HOOK
COL	COLUMN
CLL	COLUMN LINE
CMU	CONCRETE MASONRY UNIT
CSB	CONCRETE SPLASH BLOCK
CJ	CONTROL JOINT
DBL	DOUBLE
DHW	DOUBLE HUNG WINDOWS
DMPF	DAMP PROOFING
DEMO	DEMOLITION
DET	DETAIL

DIA	DIAMETER
DIM	DIMENSION
DS	DOWN SPOUT
DWG	DRAWING
EB	EXPANSION BOLT
EWC	ELECTRIC WATER COOLER
EA	EACH
E	EAST
EL	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EXH	EXHAUST
EXIST	EXISTING
EJ	EXPANSION JOINT
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
FOS	FACE OF STUD
FT	FEET
FIN	FINISH
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FO	FINISHED OPENING
FA	FIRE ALARM
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFE	FINISH FLOOR ELEVATION
FHC	FIRE HOSE CABINET
FLR FIN	FLOOR FINISH
FLR SK	FLOOR SINK
FLUOR	FLUORESCENT
GC	GENERAL CONTRACTOR
GALV	GALVANIZED
GL	GLASS
GFRG	GLASS-FIBER-REINFORCED GYPSUM
GR FL	GROUND FLOOR
GDR	GUARD RAIL
GYM	GYMNASIUM
GYP BD	GYPSUM BOARD
GL BLK	GLASS BLOCK
HC	HANDICAP
HT	HEIGHT
HMD	HOLLOW METAL DOOR
HMDF	HOLLOW METAL DOOR AND FRAME

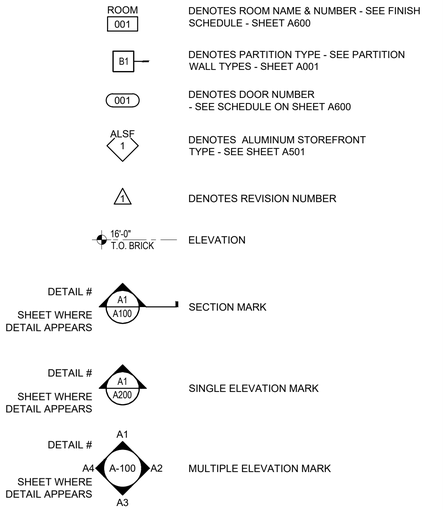
HMF	HOLLOW METAL FRAME
HORIZ	HORIZONTAL
HB	HOSE BIB
HC	HOSE CABINET
H&CW	HOT AND COLD WATER
HW	HOT WATER
INCL	INCLUDED
INFO	INFORMATION
ID	INSIDE DIAMETER
INSUL	INSULATION
JAN CLO	JANITOR CLOSET
KB	KNOX BOX
LAM	LAMINATE
LAM GL	LAMINATED GLASS
LAV	LAVATORY
LT GA	LIGHT GAGE
LWC	LIGHTWEIGHT CONCRETE
LD BRG	LOAD-BEARING
LVR	LOUVER
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S RECOMMENDATION
MRT	MARBLE THRESHOLD
MO	MASONRY OPENING
MBR	MASTER BEDROOM
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MWP	MEMBRANE WATERPROOFING
MTL	METAL
MD	METAL DECK
METD	METAL DOOR
METF	METAL FLASHING
MEZZ	MEZZANINE
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLDG	MOLDING(MOULDING)
MS	MOP SINK
N	NORTH
NA	NOT APPLICABLE

NTE	NOT TO EXCEED
NTS	NOT TO SCALE
ORD	OVERFLOW ROOF DRAIN
OH DR	OVERHEAD (COILING) DOOR
OF/CI	OWNER FURNISHED INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
PNT	PAINT
PR	PAIR
PNL	PANEL
PERIM	PERIMETER
PLAM	PLASTIC LAMINATE
PWR	POWER
PEMB	PRE-ENGINEERED METAL BUILDING
PREFIN	PREFINISHED
PT	PRESSURE TREATED
QTY	QUANTITY
QTR	QUARTER
R	RADIUS
RLG	RAILING
REC	RECESSED
REF	REFERENCE
RCP	REFLECTED CEILING PLAN
REINF	REINFORCE
REBAR	REINFORCING STEEL BARS
REQD	REQUIRED
REV	REVISION
RH	RIGHT HAND
RDG INS	RIGID INSULATION, SOLID
RDL	ROOF DRAIN LEADER
RD	ROOF DRAIN
RO	ROUGH OPENING
RB	RUBBER BASE
RWL	RAINWATER LEADER
SAN	SANITARY
SCHED	SCHEDULE
SCP	SCUPPER
SLNT	SEALANT
SMLS	SEAMLESS
SHT	SHEET
SM	SHEET METAL
SHV	SHELVING
SH	SHINGLES
SD	SHOP DRAWINGS

SHR	SHOWER
SHRD	SHOWER DRAIN
SHR HD	SHOWER HEAD
SKLT	SKYLIGHT
SGD	SLIDING GLASS DOOR
SCMU	SOLID CONCRETE MASONRY UNIT
SCWD	SOLID CORE WOOD DOOR
STC	SOUND TRANSMISSION CLASS
S	SOUTH
SQ	SQUARE
SF	SQUARE FOOT(FEET)
SQ YD	SQUARE YARD
SST	STAINLESS STEEL
SS	STANDING SEAM (ROOF)
STL JST	STEEL JOIST
STL RF DK	STEEL ROOF DECK
ST	STREET
TMPD GL	TEMPERED GLASS
TEMP	TEMPORARY
THK	THICKNESS
TO	TOP OF _____
TOB	TOP OF BEAM
TOS	TOP OF STEEL
TN	TRUE NORTH
TYP	TYPICAL
UCD	UNDERCUT DOOR
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VR	VAPOR RETARDER
VTR	VENT THROUGH ROOF
VIF	VERIFY IN FIELD
VERT	VERTICAL
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VFAT	VINYL FACED ACOUSTICAL TILE
WC	WATER CLOSET
WH	WATER HEATER
WPM	WATERPROOF MEMBRANE
WH	WEEP HOLE
WWF	WELDED WIRE FABRIC
WGL	WIRED GLASS
W/	WITH
WD	WOOD
WDF	WOOD DOOR AND FRAME

C1 ABBREVIATIONS

SCALE: N.T.S



B2 SYMBOL LEGEND

SCALE: NTS

1. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF DISCREPANCIES IN THE DOCUMENTS BETWEEN THE DRAWINGS AND SPECIFICATIONS, AND/OR BETWEEN THE CONSTRUCTION DOCUMENTS AND THE ACTUAL JOB CONDITIONS WHICH AFFECT THE EXECUTION OF THE WORK INDICATED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL THE WORK PERFORMED BY SUBCONTRACTORS UNLESS NOTED OR INDICATED OTHERWISE.
3. THE CONTRACTOR SHALL LAY- OUT WALLS AND PARTITIONS AS THEY RELATE TO THE STRUCTURE AND OTHER BUILDING ELEMENTS AS SHOWN IN THE CONSTRUCTION DOCUMENTS. CONFLICTS OR AREAS OF INTERPRETATION SHALL BE RESOLVED BY THE ARCHITECT.
4. THE CONTRACTOR SHALL VERIFY AND CORRELATE ALL DIMENSIONS DURING THE CONSTRUCTION LAY- OUT OF THE WORK. THE FOLLOWING GUIDANCE APPLIES TO DIMENSIONS USED ON THE ARCHITECTURAL DRAWINGS
   A. THE CONTRACTOR SHALL USE DIMENSIONS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
   B. THE CONTRACTOR SHALL NOT SCALE FROM THE DRAWINGS.
   C. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF DISCREPANCIES AND/ OR CONFLICTS IN DIMENSIONS SHOWN ON THE DRAWINGS.
   D. ALL PLAN DIMENSIONS ARE FROM FINISHED FACE OF MATERIAL TO FINISHED FACE OF MATERIAL OR COLUMN CENTERLINES UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, SIZES AND SPECIFIC REQUIREMENTS OF ALL FREESTANDING, UNDER CABINET AND BUILT-IN EQUIPMENT PRIOR TO BEGINNING SHOP DRAWINGS.
7. THE CONTRACTOR SHALL VERIFY THAT ALL LIGHT SWITCHES, THERMOSTATS, WINDOW TREATMENT OR AV EQUIPMENT CONTROLS, FIRE STROBES OR PULL STATIONS ARE LOCATED IN THE TYPICAL MOUNTING HEIGHTS AND LOCATIONS SHOWN ON THE DRAWINGS.
8. THE CONTRACTOR SHALL MAKE ALL EXTERIOR WALL/ROOF OR WALL/WALL TRANSITIONS WEATHER TIGHT AND AIRTIGHT WITH SEALANT TO MAINTAIN REQUIRED INSULATION VALUES IN THE FACILITY UNLESS NOTED OR INDICATED OTHERWISE. NO GAPS, OPENINGS, OR PENETRATIONS IN THE EXTERIOR WALL OR ROOF ASSEMBLIES SHALL BE LEFT EXPOSED TO THE ELEMENTS.
9. SEAL ALL ACOUSTICAL SOUND PARTITIONS WITH ACOUSTICAL SEALANT AT THE BASE, HEAD AND ALL OPENINGS.
10. PROVIDE FINISHED WALL CONSTRUCTION BEHIND ALL EQUIPMENT, MILLWORK AND CASEWORK.
11. TYPICAL DOOR LOCATIONS SHALL BE 6" FROM FACE OF WALL TO INSIDE EDGE OF DOOR FRAME UNLESS INDICATED OR NOTED OTHERWISE.

B3 GENERAL NOTES

SCALE: NTS

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HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date
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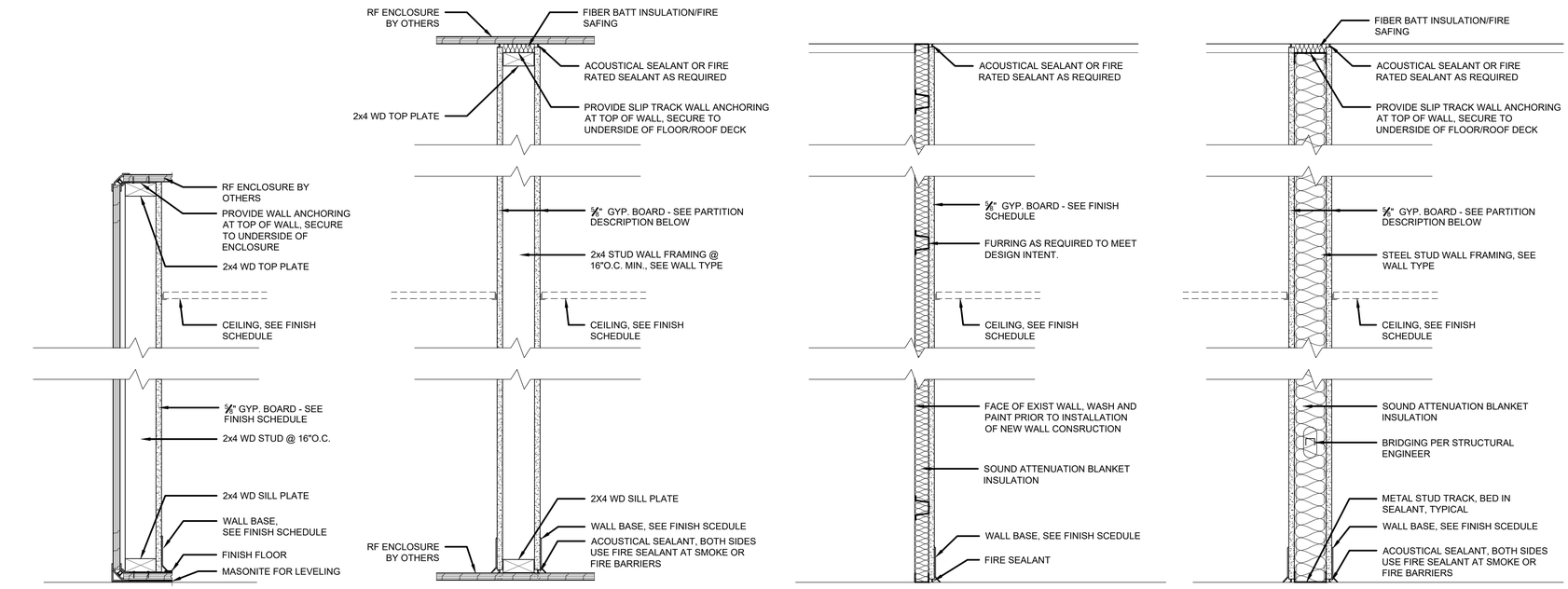
ABBREVIATIONS, SYMBOLS & GENERAL NOTES

PROJECT NUMBER **24107**
DATED 03/28/2025

G-002



GENERAL NOTE:
USE ONLY NON-FERROUS FASTENERS ON WALL ASSEMBLY, DOOR FRAME, & TRIM FOR ALL CONSTRUCTION WITHIN MAGNET ROOM #120.

B1 INTERIOR PARTITIONS

SCALE: 1-1/2"=1'-0"

FIRE RATED WALLS & SMOKE PARTITION NOTES

1. PROVIDE FIRE SEALANT AT TOP AND BOTTOM TRACKS AND ALL PENETRATIONS AT FIRE-RATED WALLS
2. AT FIRE RATED PARTITIONS, PENETRATIONS FOR CABLES, CONDUIT, AND PIPES SHALL BE PROTECTED BY A FIRE STOP SYSTEM OR DEVICE.
3. AT SMOKE RATED PARTITIONS, PENETRATIONS FOR CABLES, CONDUIT, PIPES AND MECHANICAL DUCTS SHALL BE PROTECTED BY A SYSTEM OR MATERIAL THAT IS CAPABLE OF LIMITING THE TRANSFER OF SMOKE.
4. LABEL FIRE AND SMOKE WALLS AND PARTITIONS ABOVE CEILING IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS. MIN. 3" HIGH LETTERING WITHIN 15' OF EACH END OF WALL AND NOT EXCEEDING 30' APART.

WALL TYPE GENERAL NOTES

1. ALL WALLS EXTEND TO DECK ABOVE UNLESS NOTED OTHERWISE.
2. SEAL ALL WALL PENETERATIONS IN ALL WALLS U.N.O.
3. PROVIDE TWO CONTINUOUS BEADS OF ACOUSTICAL SEALANT TO SEAL BOTTOM OF WALL TO FLOOR BELOW AND TO DECK ABOVE
4. PROVIDE MINIMUM TWO GALVANIZED METAL STUDS AT JAMB CONDITIONS U.N.O.
5. DO NOT INSTALL JUNCTION BOXES OR OUTLETS BACK-TO-BACK, TYP.
6. INSTALL SOUND PUTTY PADS AT ALL JUNCTION BOXES IN PARTITIONS WITH STC-RATING OF 50 OR ABOVE
7. PROVIDE 20GA. GALVANIZED SHEET METAL BLOCKING AT TYP. WALL-MOUNTED EQUIPMENT IN METAL STUD WALLS, PROVIDE WOOD BLOCKING AT IFP. PROVIDE 14 GA MIN. STUDS AT IFP LOCATIONS.
8. ALL GYPSUM BOARD TO BE MOLD AND MOISTURE RESISANT.
9. REFER TO SPECIFIC WALL SECTIONS AND DETAILS FOR SPECIFIC CONDITIONS AND HEIGHTS.
10. WHERE SPRAY FOAM INSULATION FACES THE INTERIOR OF THE BUILDING AND IS NOT COVERED BY GYPSUM BOARD, PROVIDE THERMAL/IGNITION BARRIER COATING PER SPECIFICATIONS.
11. CUT GYPSUM BOARD TO FIT AROUND METAL DECK PROFILES WHERE REQUIRED.
12. FLUID APPLIED MEMBRANE AIR BARRIER, WHERE USED, IS TO BE CONTINUOUS FROM TOP OF WALL TO TOP OF ROOFING.
13. REFER TO STRUCTURAL FOR LOAD BEARING AND LATERAL LOAD RESISTANT WALL CONSTRUCTION.
14. PROVIDE CEMENTITIOUS TILE BACKER BOARD BEHIND TILE AND MOISTURE RESISTANT GYPSUM WALL BOARD ABOVE TILE, WHERE OCCURS.
15. CONTRACTOR SHALL PROVIDE BLOCKING REINFORCING BEHIND WALL MOUNTED EQUIPMENT. COORDINATE WITH A/V, DATA, CASEWORK, FURNITURE, ELECTRICAL, AND INTERIOR ELEVATION DRAWINGS.

A1 NOTES

SCALE: NTS

A3 .

SCALE:

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PARTITION TYPES

PROJECT NUMBER	24107
DATED	03/28/2025

G-003

STRUCTURAL SPECIFICATIONS

MISCELLANEOUS

1. THE STRUCTURAL SYSTEM IS UNSTABLE UNTIL ALL CONNECTIONS HAVE BEEN MADE AND ALL CONCRETE HAS REACHED ITS MINIMUM DESIGN STRENGTH, AS SHOWN IN THE STRUCTURAL DOCUMENTS.

2. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION TO ENSURE THE SAFETY OF THE BUILDING UNTIL STRUCTURAL SYSTEM IS COMPLETED. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, SHORING, GUYS OR TIE-DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

3. CONTRACTOR TO SUPPORT, BRACE AND SECURE EXISTING STRUCTURE AS REQUIRED. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION.

4. APPLICABLE BUILDING CODE: 8TH EDITION (2023) FLORIDA BUILDING CODE.

5. GRAVITY DESIGN LOADS:

AREA	SUPERIMPOSED LIVE LOAD	TOTAL DEAD LOAD
ROOF	20 PSF	25 PSF (10 PSF FOR UPLIFT)

6. WIND DESIGN CRITERIA:
   ULTIMATE WIND SPEED: V_{ULT} = 140 MPH (3 SECOND GUST)
   EQUIVALENT NOMINAL BASIC WIND SPEED V_{ASD} = 109 MPH (3 SECOND GUST)
   TORNADO SPEED, V_T = N/A
   RISK CATEGORY = II
   TORNADO EFFECTIVE PLAN AREA, A_E = 2,000 SF
   EXPOSURE CATEGORY = C
   ENCLOSED BUILDING INTERNAL PRESSURE COEFFICIENT, GC_{Pi}= +/-0.18
   ENCLOSED BUILDING TORNADO INTERNAL PRESSURE COEFFICIENT, GC_{PiT} = +.55/-.18
   WIND BORNE DEBRIS REGION

7. RAIN DESIGN CRITERIA:
   DESIGN STORM RETURN PERIOD = 100 YRS
   RAINFALL INTENSITY,i = 8.92 IN/HR (15 MIN. STORM)

8. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REFERENCED BUILDING CODE.

9. COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. DO NOT SCALE DRAWINGS.

10. CONTACT ENGINEER WITH ANY QUESTIONS OR DISCREPANCIES FOUND ON DRAWINGS.

11. BUILDING EXPANSION JOINTS (EJ), WHERE SHOWN, WILL EXPAND AND CONTRACT OVER THE LIFE OF THE BUILDING. JOINT SEALANTS AND COVERS MUST ACCOMMODATE THIS MOVEMENT.

12. SECTIONS AND DETAILS ARE REFERENCED IN TYPICAL LOCATIONS BUT ALSO APPLY TO ALL OTHER SIMILAR CONDITIONS.

13. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.

14. SUBMIT SHOP DRAWINGS AS REQUIRED HEREIN. ALLOW FOR TWO WEEKS REVIEW TIME AFTER RECEIPT OF SUBMITTALS BY THIS FIRM. ALL SUBMITTALS SHALL BE CHECKED AND SIGNED BY THE GENERAL CONTRACTOR AND SIGNED/SEALED BY THE DELEGATED ENGINEER, WHERE SPECIFIED HEREIN.

15. CONTRACTOR SHALL NOT BE RELIEVED FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS OR MIX DESIGNS BY THE ENGINEER'S REVIEW THEREOF.

16. ANY CHANGES TO THE STRUCTURE SHALL HAVE BEEN REVIEWED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO COMMENCING WORK ON ITEMS AFFECTED.

17. CONTRACTOR SHALL NOTIFY THIS OFFICE WHEN THE STRUCTURAL SYSTEM IS SUBSTANTIALLY COMPLETED, AND BEFORE SHEATHING, CEILINGS, OR ROOFING IS INSTALLED.

DELEGATED ENGINEER

1. WHERE NOTED HEREIN, A LICENSED PROFESSIONAL (DELEGATED) ENGINEER SHALL BE RETAINED TO DESIGN THE PRODUCT OR ASSEMBLY.

2. THE DELEGATED ENGINEER SHALL BE EXPERIENCED IN THE DESIGN OF THE REFERENCED PRODUCT OR ASSEMBLY.

3. THE DELEGATED ENGINEER MUST BE PROVIDED WITH A COPY OF THESE DRAWINGS AND SPECIFICATIONS.

4. IT IS THE DELEGATED ENGINEER'S RESPONSIBILITY TO REVIEW THE ENGINEER OF RECORD'S WRITTEN ENGINEERING REQUIREMENTS AND AUTHORIZATION FOR THE DELEGATED ENGINEERING DOCUMENT TO DETERMINE THE APPROPRIATE SCOPE OF ENGINEERING.

5. THE DELEGATED ENGINEERING DOCUMENT SHALL COMPLY WITH THE WRITTEN ENGINEERING REQUIREMENTS RECEIVED FROM THE ENGINEER OF RECORD. THEY SHALL INCLUDE THE PROJECT IDENTIFICATION AND THE CRITERIA USED AS A BASIS FOR ITS PREPARATION. IF A DELEGATED ENGINEER DETERMINES THERE ARE DETAILS, FEATURES OR UNANTICIPATED PROJECT LIMITS WHICH CONFLICT WITH THE WRITTEN ENGINEERING REQUIREMENTS PROVIDED BY THE ENGINEER OF RECORD, THE DELEGATED ENGINEER SHALL TIMELY CONTACT THE ENGINEER OF RECORD FOR RESOLUTION OF CONFLICTS.

6. THE DELEGATED ENGINEER SHALL FORWARD THE DELEGATED ENGINEERING DOCUMENT TO THE ENGINEER OF RECORD FOR REVIEW. ALL FINAL DELEGATED ENGINEERING DOCUMENTS REQUIRE THE IMPRESSED SEAL AND SIGNATURE OF THE DELEGATED ENGINEER AND INCLUDE:
   A) DRAWINGS INTRODUCING ENGINEERING INPUT SUCH AS DEFINING THE CONFIGURATION OR STRUCTURAL CAPACITY OF STRUCTURAL COMPONENTS AND/OR THEIR ASSEMBLY INTO STRUCTURAL SYSTEMS.
   B) CALCULATIONS.

DEFERRED SUBMITTALS BY DELEGATED ENGINEERS

1. IN ACCORDANCE WITH FBC 107.3.4.1, THE FOLLOWING PRE-ENGINEERED SPECIALITY ITEMS FOR PORTIONS OF THE BUILDING WILL NOT BE SUBMITTED AT THE TIME OF BUILDING PERMIT APPLICATION BUT WILL BE DEFERRED UNTIL AFTER THE PERMIT HAS BEEN ISSUED:
   A) METAL STUD FRAMING
   B) STEEL BAR JOISTS

2. THESE ELEMENTS ARE PERFORMANCE-BASED DESIGN. THE CONTRACTOR SHALL CONTRACT FOR THE DESIGN AND CONSTRUCTION OF THESE ELEMENTS DURING THE CONSTRUCTION PHASE. THE SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED AND SIGNED BY A LICENSED FLORIDA DELEGATED PROFESSIONAL ENGINEER PER FLORIDA STATUTES. THEY SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

EXISTING BUILDINGS

INFORMATION ON THE EXISTING BUILDING, SHOWN ON THESE PLANS, IS OBTAINED FROM EXISTING BUILDING PLANS BY FRANCE ENGINEERING, LLC, DATED 7/23/2019. EXISTING INFORMATION DOES NOT NECESSARILY REFLECT AS-BUILT CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION SHOWN ON THESE PLANS AND NOTIFY THE ENGINEER OF ANY VARIATION.

GEOTECHNICAL INVESTIGATION

1. A SUBSURFACE INVESTIGATION SHALL BE COMPLETED AT THE SITE BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO BEGINNING EARTHWORK OPERATIONS.

2. THE GEOTECHNICAL ENGINEER SHALL DETERMINE THE METHOD OF TESTING. (BORINGS, PROBES, HAND AUGERS, ETC.)

3. A SIGNED/SEALED SOILS REPORT SHALL BE SUBMITTED TO THE A/E, WHICH SHALL INCLUDE SITE PREPARATION PROCEDURE, FOUNDATION DESIGN RECOMMENDATIONS, AND CONSTRUCTION TESTING REQUIREMENTS.

4. SINCE FOUNDATION DESIGN INFORMATION WAS NOT AVAILABLE AT THE TIME THESE DRAWINGS WERE PREPARED, THE FOLLOWING ASSUMPTIONS WERE MADE:
   A) MAXIMUM BEARING PRESSURE = 2,000 PSF
   B) MAXIMUM SETTLEMENT = 3/4"
   C) MAXIMUM DIFFERENTIAL SETTLEMENT = 1/2"

5. THE FOUNDATION DESIGN IS SUBJECT TO CHANGE PENDING THE RESULTS OF THE GEOTECHNICAL INVESTIGATION AND PENNONI'S REVIEW OF THE SOILS REPORT.

CAST IN PLACE CONCRETE

1. ALL CAST-IN-PLACE CONCRETE WORK INCLUDES REINFORCING STEEL AND RELATED WORK SHOWN INCLUDING FORMWORK, SETTING ANCHOR BOLTS, PLATES, FRAMES, DOWELS FOR MASONRY OR OTHER ITEMS EMBEDDED IN CONCRETE.

2. APPLICABLE STANDARDS

ACI NUMBER	TITLE
117	STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION
226	GROUND GRANULATED BLAST-FURNACE SLAG
301	STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
302	GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION
304	GUIDE FOR MEASURING MIXING, TRANSPORTING AND PLACING CONCRETE
304.2R	PLACING CONCRETE BY PUMPING METHODS.
305R	HOT WEATHER CONCRETING
306R	COLD WEATHER CONCRETING
308	STANDARD PRACTICE FOR CURING CONCRETE
309R	GUIDE FOR CONSOLIDATION OF CONCRETE
315	MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES
318	BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
347	RECOMMENDED PRACTICE FOR CONCRETE FORMWORK

CRSI NUMBER	TITLE
63	RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS

3. CONCRETE MATERIALS
   A) PORTLAND CEMENT – ASTM C 150, TYPE I
   B) AGGREGATES – NORMAL WEIGHT CONCRETE, COARSE AND FINE, ASTM C33. STRUCTURAL LIGHT WEIGHT ASTM C330.
   C) AIR-ENTRAINING – ASTM C260
   D) WATER REDUCING – ASTM C494, TYPE A
   E) WATER – FRESH, CLEAN AND POTABLE
   F) NO ACCELERATORS, RETARDERS OR ADMIXTURES CONTAINING CHLORIDES WILL BE PERMITTED
   G) FLY-ASH – ASTM C618, CLASS F, 20% MAXIMUM OF CEMENTITIOUS MATERIAL BY WEIGHT. DO NOT USE FOR EXPOSED SLABS OR ARCHITECTURAL CONCRETE.
   H) SUPER PLASTICIZER – ASTM C494, TYPE F OR G, WHERE AUTHORIZED BY THE ENGINEER.
   I) GROUND GRANULATED BLAST-FURNACE SLAG CEMENT – ASTM C989, 50% MAXIMUM BY WEIGHT.
   J) MAXIMUM AGGREGATE SIZE – FOOTINGS = #57, OTHERS #67

4. REINFORCING MATERIALS
   A) DEFORMED BARS – ASTM A615, GRADE 60
   B) SMOOTH DOWELS – ASTM A615, PLAIN BARS, MINIMUM YIELD STRENGTH OF 60,000 PSI.
   C) CORROSION RESISTANT UNCOATED STEEL (MMFX-2) – ASTM A615, GRADE 75 AND ASTM A1035 LOW-CARBON (8% MINIMUM) CHROMIUM BY MMFX OR EQUAL.
   D) WELDABLE REBAR – ASTM A706, GRADE 60.
   E) WELDED WIRE FABRIC – ASTM A1064, PLAIN WIRE FABRIC IN FLAT SHEETS ONLY.
   F) ACCESSORIES TO CONFORM TO ACI 315.
   G) WHERE CONCRETE SURFACES ARE EXPOSED, MAKE THOSE PORTIONS OF ALL ACCESSORIES IN CONTACT WITH THE CONCRETE SURFACE OR WITHIN 1/2 INCH THEREOF, OF PLASTIC OR STAINLESS STEEL.

5. PROVIDE THE FOLLOWING MINIMUM CONCRETE STRENGTHS AT 28 DAYS:
   A) FOOTINGS, SLAB-ON-GRADE----------3000 PSI

6. CONCRETE MUST BE BATCHED, MIXED AND TRANSPORTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR READY-MIXED CONCRETE ASTM C94.

7. REQUIRED SLUMP = 4 PLUS OR MINUS ONE INCH

8. CONCRETE MUST BE PLACED WITHIN 90 MINUTES OF BATCH TIME. WHEN AIR TEMPERATURE IS BETWEEN 85 AND 90 DEGREES F, REDUCE MIXING AND DELIVERY TIME TO 75 MINUTES. WHEN AIR TEMPERATURE IS HIGHER THAN 90 DEGREES F, REDUCE MIXING AND DELIVERY TIME TO 60 MINUTES.

9. DO NOT ADD WATER AT THE JOB SITE WITHOUT APPROVAL OF THE PROJECT SUPERINTENDENT. DO NOT EXCEED THE SLUMP LIMITATION. USE ONLY COLD WATER FROM THE TRUCK TANK. ANY ADDED WATER MUST BE INDICATED ON THE DELIVERY TICKET PLUS THE NAME OF THE PERSON AUTHORIZING. TEST CYLINDERS SHALL BE TAKEN AFTER THE ADDITION OF WATER.

10. LAP SPLICE REINFORCING PER CONCRETE LAP SCHEDULE MINIMUM UNLESS OTHERWISE SHOWN OR NOTED.

11. PROVIDE CORNER BARS AT ALL WALL FOOTING, WALL AND BEAM CORNERS. SIZE AND NUMBER TO MATCH HORIZONTAL BARS.

12. PROVIDE FOUNDATION DOWELS TO MATCH SIZE AND NUMBER OF VERTICAL BARS. EMBED DOWELS TO:
   A) 3" ABOVE BOTTOM OF FOOTINGS

13. REINFORCEMENT SHALL BE FASTENED AND SECURED TOGETHER TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR THE PLACING OF CONCRETE.

14. REINFORCING BAR COVER
   A) FOOTINGS 2" (TOP), 3" (SIDES AND BOTTOM)
   B) COLUMNS AND BEAMS 1-1/2"
   C) SLABS 3/4" (INTERIOR), 1-1/2" (EXTERIOR)

15. WHERE BAR LENGTHS ARE GIVEN ON THE DRAWINGS, LENGTH OF HOOK, IF REQUIRED, IS NOT INCLUDED.

16. SELECT PROPORTIONS IN ACCORDANCE WITH ACI 301 TO PROVIDE CONCRETE CAPABLE OF BEING PLACED WITHOUT EXCESSIVE SEGREGATION AND WITH ACCEPTABLE FINISHING PROPERTIES, DURABILITY, SURFACE HARDENERS, APPEARANCE, AND STRENGTH REQUIREMENTS REQUIRED BY THESE SPECIFICATIONS.

17. CHAIR WELDED WIRE FABRIC REINFORCING AT 3'-0" ON CENTER MAXIMUM IN EACH DIRECTION.

18. MAXIMUM WATER TO CEMENT RATIO WHEN NO BACK-UP DATA IS AVAILABLE:
   A) 3000 PSI, 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.58 MAXIMUM (NON-AIR-ENTRAINED), 0.47 MAXIMUM (AIR-ENTRAINED).

19. DATA TO BE SUBMITTED:
   A) INTENDED USAGE AND LOCATION FOR EACH TYPE
   B) MIX DESIGN FOR EACH TYPE
   C) CEMENT CONTENT IN POUNDS-PER-CUBIC YARD
   D) COARSE AND FINE AGGREGATE IN POUNDS/CUBIC YARD
   E) WATER CEMENT RATIO BY WEIGHT
   F) CEMENT TYPE AND MANUFACTURER
   G) SLUMP RANGE
   H) AIR CONTENT
   I) ADMIXTURE TYPE AND MANUFACTURER
   J) PERCENT ADMIXTURE BY WEIGHT
   K) STRENGTH TEST DATA REQUIRED TO ESTABLISH MIX DESIGN.
   L) COMPLETE DETAIL AND PLACING SHOP DRAWINGS FOR ALL REINFORCING STEEL INCLUDING ACCESSORIES THAT HAVE BEEN REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR. INCLUDE ALL REQUIRED DIMENSIONS AND ELEVATIONS (IE. TOP OF CONCRETE)

20. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CONSTRUCTION OF FORMWORK, SHORING AND RE-SHORING IN ACCORDANCE WITH ACI 347.
   A) FORM AND SHORING DESIGN BY A P.E. REGISTERED IN THE STATE OF FLORIDA.

21. SUBMIT FORM WORK AND SHORING DRAWINGS TO LOCAL BUILDING DEPARTMENT WHEN REQUIRED BY FLORIDA THRESHOLD LAW.

22. CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS MUST BE MADE AND LOCATED TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE.
   A) NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN BEAMS, GIRDERS AND SLABS.
   B) LOCATION OF ANY CONSTRUCTION JOINT NOT SHOWN IS SUBJECT TO REVIEW AND ACCEPTANCE BY ENGINEER.

23. INTERNAL VIBRATION, PROPERLY APPLIED IS THE REQUIRED METHOD OF CONSOLIDATING PLASTIC CONCRETE.

24. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS AND WALLS UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.

25. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, SLEEVES, AND SLAB RECESSES AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED. NO SLEEVE, OPENINGS, OR INSERT MAY BE PLACED IN BEAMS, JOISTS, OR COLUMN UNLESS APPROVED BY THE ENGINEER.

26. CONTRACTOR SHALL VERIFY EMBEDDED ITEMS INCLUDING, BUT NOT LIMITED TO, ANCHOR BOLTS, BOLT CLUSTERS, WELD PLATES, ETC., BEFORE PLACING CONCRETE. NOTIFY ENGINEER OF ANY CONFLICTS WITH REBAR.

27. ALL EXPOSED CONCRETE SURFACES TO BE IN ACCORDANCE WITH ACI 301 SECTION 5.3.3.(C), INCLUDING SURFACE TOLERANCE CLASS A AS SPECIFIED IN ACI 117.U.N.O.

28. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED CONCRETE FINISHES.

29. SLOPE WALKWAYS AND BALCONIES TO DRAIN AWAY FROM THE BUILDING.

30. BUILDING FLOOR AND SITE SLABS-ON-GRADE SHALL BE 4" MINIMUM THICKNESS, UNLESS NOTED OTHERWISE.
   A) REINFORCED WITH FIBROUS REINFORCING, SEE SPEC SECTION.
   B) PLACED ON 10 MIL POLYETHYLENE VAPOR RETARDER. LAP 6" AND TAPE ALL JOINTS.
   C) SAW-CUT CONTROL JOINTS @ LESS THAN OR EQUAL TO 15'-0" EACH WAY.
   D) PROVIDE HOUSEKEEPING PADS AS REQUIRED.
   E) SEE DRAWINGS FOR ANY ADDITIONAL CONDITIONS.

31. TESTING
   A) A QUALIFIED TESTING LAB SHALL BE RETAINED TO PERFORM QUALITY CONTROL WORK AND ON-SITE TESTING.
   B) SLUMP TEST – ASTM 143
   C) MOLD AND CURE TEST CYLINDERS (ASTM C-31) AND TEST CYLINDERS FOR STRENGTH (ASTM C39). TAKE ONE TEST – THREE CYLINDERS FOR EACH DAYS POUR OF 100 CUBIC YARDS, OR FRACTION THEREOF. TEST ONE CYLINDER AT 7 DAYS, TWO AT 28 DAYS. TEST CYLINDER SAMPLES SHALL BE TAKEN AT THE POINT OF DISCHARGE WHEN USING A PUMP.
   D) ONE COPY OF ALL TEST REPORTS SHALL BE SENT DIRECTLY TO THE OWNER, ENGINEER, ARCHITECT AND GENERAL CONTRACTOR.

32. CONTRACTOR SHALL PROVIDE FLATNESS AND LEVELNESS IN CONCRETE SLABS PER ACI 302.1R, FIG. 10.7 MINIMUM REQUIRED "F" NUMBERS FOR TYPE OF SLAB USE. REFER TO ACI 117 FOR FLOOR TOLERANCES.

33. REPAIR ANY CRACKS OR DEFECTIVE AREAS THAT WILL RESTORE THE AFFECTED SURFACE OR AREAS TO THEIR FULL DESIGN STRENGTH AND APPEARANCE. CONTACT THE STRUCTURAL ENGINEER FOR ADVICE AND EVALUATION.

34. ACCEPTANCE OF THE STRUCTURE WILL BE MADE IN CONFORMANCE WITH ACI 301.

35. ALL CAST-IN-PLACE CONCRETE MUST BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT A RELATIVELY CONSTANT TEMPERATURE FOR A MINIMUM OF 7 DAYS FOLLOWING THE PLACING OF THE CONCRETE BY THE USE OF A WATER SPRAY, WATER SATURATED FABRIC, MOISTURE RETAINING MEMBRANE OR LIQUID CURING COMPOUND.

36. CURE SLABS-ON-GRADE FOR THE FIRST 72 HOURS BY THE USE OF:
   A) FOG SPRAYING
   B) PONDING
   C) SPRINKLING
   D) CONTINUOUSLY WET ABSORPTIVE MATS OR FABRIC
   E) CONTINUE CURING BY USE OF MOISTURE RETAINING COVER UNTIL CONCRETE HAS OBTAINED ITS SPECIFIED 28 DAY COMPRESSIVE STRENGTH.
   F) OR LIQUID CURING COMPOUND AFTER FINISHING PROCESS IS COMPLETED.
   G) CONCRETE WET CURE TIME TO BE 7 DAYS MINIMUM AT 50 DEGREES MINIMUM TEMPERATURE.

DRAWING INDEX

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BID DOCUMENTS

HCA FLORIDA GULF COAST HOSPITAL
Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

STRUCTURAL SPECIFICATIONS

PROJECT NUMBER 24107
DATED 03/28/2025

S-001

STRUCTURAL SPECIFICATIONS (CONTINUED)
CAST IN PLACE CONCRETE (CONTINUED)

37. SUBMIT MATERIALS AND METHOD OF CURING FOR REVIEW.

38. DO NOT USE MOISTURE RETAINING CURING COMPOUNDS FOR CURING SURFACES TO RECEIVE CARPET, FLEXIBLE FLOORING, CERAMIC TILED FLOORS OR OTHER SPECIFIED FLOOR SYSTEMS, UNLESS IT HAS BEEN DEMONSTRATED THAT SUCH COMPOUNDS WILL NOT PREVENT BOND.

39. DO NOT PERMIT CONCRETE NOT FULLY CURED TO BE EXPOSED TO EXCESSIVE TEMPERATURE CHANGES OR HIGH WINDS.

40. POUR ALL GROUND SLABS ON 10 MIL MINIMUM VAPOR RETARDER IN COMPLIANCE WITH ASTM E1745, LAPPED 6" MINIMUM AND FULLY TAPED.

41. EQUIPMENT MADE OF ALUMINUM OR ALUMINUM ALLOYS, SHALL NOT BE USED FOR PUMP LINES, TREMIES, OR CHUTES OTHER THAN SHORT CHUTES SUCH AS THOSE USED TO CONVEY CONCRETE FROM A TRUCK MIXER.

42. THE CODE PROHIBITS THE USE OF ALUMINUM (CONDUIT, PIPES, ETC.) IN STRUCTURAL CONCRETE UNLESS IT IS EFFECTIVELY COATED OR COVERED.

FIBROUS REINFORCING (ALTERNATE TO W.W.F. IN SLAB-ON-GRADE)

1. REINFORCING FIBERS TO BE VIRGIN 100% MICRO SYNTHETIC POLYPROPYLENE FIBERS, SPECIFICALLY MANUFACTURED FOR USE IN CONCRETE, CONTAINING NO REPROCESSED OLEFIN MATERIALS, WITH THE FOLLOWING MINIMUM PHYSICAL CHARACTERISTICS:
   A) SPECIFIED GRAVITY: 0.91
   B) YOUNG'S MODULUS 0.5 ($3.5KN/MM^2$)
   C) TENSILE STRENGTH: 45–60 KSI
   D) LENGTH: 3/4" MAXIMUM, MULTI GRADATION DESIGN

2. REINFORCING FIBERS TO BE SUPPLIED BY THE FOLLOWING APPROVED MANUFACTURERS:
   A) "FIBERSTRAND 100", EUCLID CHEMICAL COMPANY
   B) "FIBERMESH 150 OR 300, PROPEX CONCRETE SOLUTIONS
   C) "FORTA ECONO-NET", FORTA CORPORATION
   D) "NYCON SUPER FIBERS", NYCON, INC.

3. FIBERS TO BE ADDED IN MANUFACTURER'S APPROVED AMOUNT WITH A MINIMUM OF 1.5 LBS PER CUBIC YARD FOR POLY AND NYLON.

4. CONCRETE TO BE MIXED IN ACCORDANCE WITH FIBER MANUFACTURER'S RECOMMENDATIONS FOR UNIFORM AND COMPLETE DISPERSION OF FIBER BUNDLES INTO SINGLE MONOFILAMENTS WITHIN CONCRETE.

5. FOR A "NON-HAIRY" FINISH, USE A MONOFILAMENT FIBER. MORE DEMANDING APPLICATIONS, USE A COLLATED FIBRILLATED FIBER, WHICH WILL WEAR AWAY OVER TIME.

MASONRY

1. HOLLOW LOAD BEARING UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT, TYPE II. MINIMUM NET COMPRESSIVE UNIT STRENGTH = 2000 PSI. (NET AREA COMPRESSIVE MASONRY STRENGTH F'M = 2000 PSI).

2. MORTAR SHALL BE TYPE S AND CONFORM TO ASTM C270 (PROPORTION OR PROPERTY SPECIFICATION).

3. COARSE GROUT SHALL CONFORM TO ASTM C476:
   A) 2500 PSI AT 28 DAYS.
   B) 1/4" MAXIMUM AGGREGATE.
   C) 8" – 11" SLUMP.

4. CODES AND STANDARDS:
   A) SPECIFICATIONS FOR MASONRY STRUCTURES – ACI 530.1/ASCE 6/ TMS 602 IS INCLUDED BY REFERENCE IN ITS ENTIRETY.
   B) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES – ACI 530/ ASCE 5/TMS 402.

5. A REINFORCED TIE BEAM SHALL BE PROVIDED IN ALL WALLS SHOWN ON THE STRUCTURAL DRAWINGS AT EACH FLOOR, THE ROOF, AND AT TOP OF ANY PARAPET WALL. USE GALVANIZED MESH-TYPE CELL CAPS. PROVIDE CORNER BARS AT ALL BEAM CORNERS TO MATCH HORIZONTAL BARS.

6. VERTICAL BARS SHALL BE HELD IN POSITION AT THE TOP AND BOTTOM OF BAR AND AT 8'_0" O.C. MAXIMUM WITH A MINIMUM CLEARANCE OF 1/2" FROM MASONRY. THE CLEAR DISTANCE BETWEEN BARS SHALL NOT EXCEED ONE BAR DIAMETER, OR MORE THAN 1". CENTER BARS IN WALLS U.N.O.

7. VERTICAL REINFORCING SHALL BE AS SHOWN ON THE DRAWINGS. FILLCELLS WITH COARSE GROUT AS SPECIFIED. PROVIDE ACI 90 DEGREE STANDARD HOOKS INTO FOOTING AND ROOF TIE BEAM. LAP SPLICE VERTICAL REINFORCEMENT ABOVE FOOTING AND ABOVE EACH FLOOR LEVEL UNLESS NOTED OTHERWISE. MAINTAIN VERTICAL REINFORCING SHOWN ON PLANS ABOVE AND BELOW MASONRY OPENINGS. CONTINUE FOUNDATION DOWELS BELOW ALL MASONRY OPENINGS.

8. REINFORCED FILL CELLS ARE TO BE CLEAN AND FREE OF ANY FOREIGN MATERIAL OR DEBRIS. REMOVE ANY INSULATING MATERIAL FROM CELLS, INCLUDING POLYSTYRENE INSULATING INSERTS, PRIOR TO GROUT POUR.

9. REINFORCING BARS SHALL BE STRAIGHT EXCEPT FOR BENDS AROUND CORNERS AND WHERE BENDS OR HOOKS ARE DETAILED ON THE PLANS.

10. REINFORCING BARS SHALL BE LAPPED PER MASONRY LAP SCHEDULE MINIMUM (UNLESS OTHERWISE NOTED) WHERE SPLICED AND SHALL BE WIRED TOGETHER.

11. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL IN SIX VERTICALS. DOWELS SHALL BE GROUTED INTO A CORE IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN AN ADJACENT CELL TO THE VERTICAL WALL REINFORCEMENT.

12. CONSOLIDATE GROUT POURS AT THE TIME OF PLACEMENT BY MECHANICAL MEANS AND RECONSOLIDATE AFTER INITIAL WATER LOSS AND SETTLEMENT.

13. ALL MASONRY FOUNDATION STEMWALLS AND RETAINING WALLS SHALL BE FULLY GROUTED.

14. STORE BLOCKS ON PALLETS AND COVER WITH PLASTIC SHEETING.

15. PLACE MASONRY IN RUNNING BOND WITH 3/8" MORTAR JOINTS. PROVIDE COMPLETE COVERAGE FACE SHELL MORTAR BEDDING, HORIZONTAL AND VERTICAL. FULLY MORTAR WEBS IN ALL COURSES OF PIERS, COLUMNS, AND PILASTERS AND ADJACENT TO GROUTED CELLS.

16. SUBMITTALS:
   A) SUBMIT PROPOSED GROUT MIX DESIGN PRIOR TO CONSTRUCTION.
   B) SUBMIT PROPOSED MORTAR MIX DESIGN PRIOR TO CONSTRUCTION.
   C) SUBMIT DETAILED SHOP DRAWINGS OF REINFORCING BARS SHOWING NUMBER, SIZE, AND LOCATION. INCLUDE BAR LISTS AND BEND DIAGRAMS. INCLUDE ALL REQUIRED DIMENSIONS AND ELEVATIONS.
   D) SUBMIT COMPRESSIVE STRENGTH TESTS OF PROPOSED MASONRY UNITS PRIOR TO CONSTRUCTION. MASONRY UNITS ARE TO BE TESTED IN ACCORDANCE WITH ASTM C140.

17. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO PERFORM THE FOLLOWING TESTS:
   A) SAMPLE AND TEST GROUT IN ACCORDANCE WITH ASTM C1019 FOR EACH 5000 SQ. FT. OF MASONRY.
   B) SLUMP TESTS – ASTM C143.
   C) MASONRY PRISM TEST IN ACCORDANCE WITH ASTM C1314. PROVIDE ONE SET OF 3 PRISMS PRIOR TO CONSTRUCTION AND DURING CONSTRUCTION FOR EACH 5000 SQ. FT. OF WALL.

18. TOPS OF PARTIALLY CONSTRUCTED WALLS SHALL BE COVERED WITH VISQUEEN WHENEVER RAIN OCCURS AND AT THE END OF THE WORK DAY.

DRILL-IN BOLTS, SCREWS AND DOWELS

1. ADHESIVE DOWELING RODS/BOLTS SHALL BE CARBON STEEL THREADED ROD CONFORMING TO ISO 898 5.8 WITH A MINIMUM TENSILE STRENGTH OF 72.5 KSI (500MPa) AND A MINIMUM YIELD OF 58 KSI (400MPa). THREADED RODS WITH NUTS AND WASHERS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

2. ANCHORING ADHESIVE SHALL BE A TWO-COMPONENT SYSTEM SUPPLIED IN MANUFACTURER'S STANDARD SIDE-BY-SIDE FOIL PACKAGE AND DISPENSED THROUGH A STATIC-MIXING NOZZLE SUPPLIED BY THE MANUFACTURER. ADHESIVE SHALL BE TESTED AND APPROVED TO MEET THE MINIMUM REQUIREMENTS OF ACI 355.4 FOR CRACKED AND UNCRACKED CONCRETE RECOGNITION. PROVIDE HILTI HY 200 SAFE SET (ESR 3187) OR RE 500 V3 (ESR 3814) ANCHORS BY HILTI OR EQUAL (E.G. SIMPSON SET-3G, ATC ULTRABOND 365CC)UNLESS SPECIFIED OTHERWISE IN THE STRUCTURAL DOCUMENT.

3. DRILL-IN REBAR DOWELS SHALL BE SET USING A TWO-PART ADHESIVE AS DESCRIBED ABOVE.

4. EXPANSION BOLTS SHALL BE HILTI KB TZ (ESR 1917) OR EQUAL. BOLT SHALL MEET DUCTILITY REQUIREMENTS OF ACI 318 SECTION D1.

5. EXPANSION BOLTS SHALL HAVE CARBON STEEL ANCHOR BODY AND NUT AND WASHER SHALL BE ELECTROPLATED ZINC COATING CONFORMING TO ASTM B633 TO A MINIMUM OF 5µM. THE STAINLESS STEEL ANCHOR BODY, NUT AND WASHER, AND EXPANSION SLEEVE SHALL CONFORM TO TYPE 316 STAINLESS STEEL. EXPANSION ANCHORS SHALL MEET THE MINIMUM REQUIREMENTS OF ACI 355.2 FOR CRACKED AND UNCRACKED CONCRETE. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

6. MASONRY SCREWS SHALL BE 1/4" DIAMETER WITH 1-5/8" MINIMUM EMBEDMENT INSTALLED IN DRILLED HOLES USING AN APPROPRIATE BIT DIAMETER.

7. SCREWS SHALL HAVE A BODY MADE OF CARBON STEEL AND SHALL BE HEAT TREATED AND SHALL HAVE 8µM ZINC COATING IN ACORDANCE WITH EN ISO 4042. PROVIDE HUS EZ (ESR 3027) SCREWS BY HILTI OR EQUAL.

8. HEAVY-DUTY CONCRETE AND MASONRY SCREWS SHALL BE TESTED AND APPROVED TO MEET THE MINIMUM REQUIREMENTS OF ACI 355.2. HILTI KWICK HUS EZ (ESR-3027 FOR CONCRETE, ESR-3056 FOR GROUT FILLED MASONRY). HEAVY DUTY SCREWS BY HILTI OR EQUAL.

9. THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THE ANCHORING PRODUCTS SPECIFIED. PENNONI TO RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO ARE TO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLATION.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC "SPECIFICATION FOR BUILDINGS", LATEST EDITION.

2. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISED CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.1. ALL WELDING SHALL BE PERFORMED USING E70XX, LOW HYDROGEN ELECTRODES. ELECTRODES ARE TO BE PROTECTED FROM MOISTURE.

3. CONNECTIONS TO BE DOUBLE ANGLE FRAMED BEAM CONNECTION PER AISC UNLESS NOTED OTHERWISE. ALL BOLTS TO BE 3/4" DIAMETER UNLESS NOTED OTHERWISE. SHOP CONNECTIONS MAY BE WELDED OR BOLTED. WELDS ARE TO BE EQUAL IN STRENGTH TO BOLTS. ALL FIELD CONNECTIONS ARE TO BE BOLTED WITH ASTM A325N OR A490 BOLTS (BEARING TYPE BOLTS WITH THREADS IN THE SHEAR PLANE) INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS. ALL BOLTS SHALL BE TIGHTENED SNUG TIGHT UNLESS OTHERWISE NOTED. DESIGN CONNECTIONS FOR THE LARGER OF EITHER THE SHEAR SHOWN ON THE DRAWINGS, (INDICATED AS "V =K" AT ENDS OF MEMBER) OR 55% OF THE MAXIMUM LOAD(IN KIPS) LISTED IN THE TABLES FOR "MINIMUM TOTAL FACTORED UNIFORM LOADS IN KIPS FOR BRACED, SIMPLE SPAN BEAMS BENT ABOUT THE STRONG AXIS" OF THE LATEST EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION".

4. SIZE AND USE OF HOLES: SEE AISC TABLE J3.3.
   A) LARGER HOLES ARE PERMITTED IN STANDARD COLUMN BASE PLATES. MAXIMUM HOLE DIAMETER = BOLT DIAMETER + 3/8". HARDENED WASHERS, TO COVER THE LARGER HOLE, SHALL BE PROVIDED.
   B) LARGER HOLES ARE NOT PERMITTED IN WIND FRAME COLUMN BASE PLATES. MAXIMUM HOLE DIAMETER = BOLT DIAMETER + 1/16".
   C) SLOTTED HOLES: A PLATE WASHERS OR A CONTINUOUS BAR WITHSTANDARD HOLES, HAVING A SIZE SUFFICIENT TO COMPLETELY COVER THE SLOT AFTER INSTALLATION, AND A MIN. OF 5/16" THICK SHALL BE PROVIDED. TACK WELD NUT TO BOLT AFTER ERECTION.

5. STEEL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER (WITHIN THE MILL TOLERANCE) LOCATED ABOVE THE HORIZONTAL CENTERLINE BETWEEN THE END CONNECTIONS.

6. VERIFY THE EXACT SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS FOR MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR PRIOR TO FABRICATION OF MATERIALS.

7. SHOP PRIME STEEL SURFACES EXCEPT THE FOLLOWING:
   A) SURFACES EMBEDDED IN CONCRETE OR MORTAR. EXTEND PRIMING OF PARTIALLY EMBEDDED MEMBERS TO A DEPTH OF 2 INCHES.
   B) SURFACES TO BE FIELD WELDED.
   C) SURFACES TO BE HIGH-STRENGTH BOLTED WITH SLIP-CRITICAL CONNECTIONS.
   D) SURFACES TO RECEIVE SPRAYED FIRE-RESISTIVE MATERIALS.
   E) GALVANIZED SURFACES.

8. SURFACE PREPARATION: CLEAN SURFACES TO BE PAINTED. REMOVE LOOSE RUST AND MILL SCALE AND SPATTER, SLAG, OR FLUX DEPOSITS. PREPARE SURFACES ACCORDING TO THE FOLLOWING SPECIFICATIONS AND STANDARDS.

9. PRIMING: IMMEDIATELY AFTER SURFACE PREPARATION, APPLY PRIMER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND AT RATE RECOMMENDED BY SSPC TO PROVIDE A DRY FILM THICKNESS OF NOT LESS THAN 1.5 MILS. USE PRIMING METHODS THAT RESULT IN FULL COVERAGE OF JOINTS, CORNERS, EDGES, AND EXPOSED SURFACES.
   A) STRIPE PAINT CORNERS, CREVICES, BOLTS, WELDS, AND SHARP EDGES.
   B) APPLY TWO COATS OF SHOP PAINT TO INACCESSIBLE SURFACES AFTER ASSEMBLY OR ERECTION. CHANGE COLOR OF SECOND COAT TO DISTINGUISH IT FROM FIRST.

10. PRIME AND PAINT ALL FIELD WELDS AFTER INSPECTION.

11. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO PERFORM THE FOLLOWING TESTS.
   A) VISUALLY INSPECT ALL STEEL MEMBERS AND CONNECTIONS.
   B) TEST 50 PERCENT OF FULL PENETRATION WELDS.

12. ONE COPY OF ALL TEST REPORTS SHALL BE SENT DIRECTLY TO OWNER, ARCHITECT, STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR.

13. STEEL SHALL CONFORM TO:
   WIDE FLANGE (WF)(WT)----------ASTM A992 (50 KSI)
   SHAPES (S, L, C, MC)----------ASTM A36
   HOLLOW STRUCTURAL SECTIONS (HSS)---ASTM A500 GRADE C (RECTANGULAR 50 KSI; ROUND 46 KSI)
   ANCHOR RODS----------ASTM F1554 (55 KSI W/S1 SUPPLEMENT)
   ANCHOR BOLTS----------ASTM A307
   FRAMING BOLTS----------ASTM A325N OR A490N
   WELDING ELECTRODES----------E70XX

14. FASTENERS AND MATERIALS USED FOR WELDING OR OTHERWISE SECURING COMPONENTS ONE TO ANOTHER SHALL BE OF DOMESTIC (USA MADE) MANUFACTURE. SIMILARLY, ALL MATERIALS USED IN THE MANUFACTURING PROCESS SHALL BE FROM A DOMESTIC SOURCE.

15. OPENINGS THROUGH STEEL BEAMS SHALL BE PROVIDED AS DETAILED ON THE DRAWINGS. ALL SUCH OPENINGS SHALL BE MACHINE CUT IN THE SHOP. ALL RECTANGULAR OPENINGS SHALL HAVE A CORNER RADIUS OF 2 TIMES THE WEB THICKNESS, 1/2" MINIMUM.

16. SHOP AND FIELD WELDS SHALL BE DONE BY A.W.S. CERTIFIED WELDERS. PROVIDE CURRENT CERTIFICATES UPON REQUEST.

17. NO SPLICES SHALL BE PERMITTED IN ANY STRUCTURAL STEEL MEMBER UNLESS SHOWN ON APPROVED SHOP DRAWINGS.

18. SUBMITTALS: CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS SHOWING ALL STRUCTURAL STEEL LAYOUTS AND DETAILS, SIZES OF MEMBERS, TYPE OF STEEL, CONNECTION DETAILS, WELDS, BOLTS, ETC., AS REQUIRED TO FABRICATE AND ERECT ALL STRUCTURAL STEEL FRAMING. ALL CONNECTIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY THE DETAILER AND SUBMITTED ON SHOP DRAWINGS, SIGNED AND SEALED BY A REGISTERED FLORIDA DELEGATED ENGINEER.

19. NON-SHRINK GROUT SHALL BE: NONMETALLIC SHRINKAGE-RESISTANT GROUT, PREMIXED, NON-CORROSIVE, NON-STAINING PRODUCT CONTAINING SELECTED SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING AND WATER-REDUCING AGENTS, COMPLYING WITH CRD-C621, CORPS OF ENGINEERS.

20. IF NOT SPECIFIED ON THE DRAWINGS, THE THROAT SIZE OF ANY FILLET WELD SHALL BE EQUAL TO 1/16" LESS THAN THE THINNEST CONNECTION COMPONENT.

21. NO FIELD WELDING OF GALVANIZED MEMBERS IS PERMITTED.

22. MINIMUM EMBEDMENT DEPTH OF ANCHOR BOLTS:
   A) BEAMS, COLUMNS, WALLS = 6"
   B) FOOTINGS = 3" FROM BOTTOM

23. ERECTION
   A) BEFORE ERECTION, THE CONTRACTOR IS TO REMOVE ALL MUD, DIRT OR OTHER FOREIGN MATTER, WHICH ACCUMULATES DURING HANDLING AND STORAGE.
   B) DRIFTING TO ENLARGE UNFAIR HOLES WILL NOT BE PERMITTED. DRILL SUCH HOLES TO ACCOMMODATE THE NEXT LARGER SIZE FASTENER, WHERE POSSIBLE.
   C) AFTER ERECTION, CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS WHERE SHOP COAT HAS BEEN DAMAGED. SPOT AND PRIME AREAS USING SAME MATERIAL AS SHOP COAT.
   D) SET ALL MEMBERS SO THAT, IN THEIR FINAL LOCATION, LEVEL, PLUMBNESS AND ALIGNMENT ARE WITHIN THE TOLERANCES PRESCRIBED BY AISC CODE.
   E) DOUBLE CONNECTIONS THROUGH COLUMN WEBS OR AT BEAMS THAT FRAME OVER THE TOPS OF COLUMNS MUST BE DESIGNED TO HAVE AT LEAST ONE INSTALLED BOLT REMAIN IN PLACE TO SUPPORT THE FIRST BEAM WHILE THE SECOND BEAM IS BEING ERECTED. ALTERNATIVELY, THE FABRICATOR MUST SUPPLY A SEAT OR EQUIVALENT DEVICE WITH A MEANS OF POSITIVE ATTACHMENT TO SUPPORT THE FIRST BEAM WHILE THE SECOND BEAM IS BEING ERECTED.

OPEN WEB STEEL JOISTS AND JOIST GIRDERS (NOTED "JOISTS" HEREIN)

1. STEEL JOIST MANUFACTURER SHALL BE A MEMBER OF THE STEEL JOIST INSTITUTE.

2. STEEL JOISTS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE AISC STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS K, LH, OR DLH SERIES (SEE PLAN), AND OSHA STEEL ERECTION STANDARD.

3. JOISTS, GIRDERS, AND ALL ACCESSORIES SHALL BE DESIGNED BY A LICENSED DELEGATED ENGINEER WHO SHALL PREPARE DESIGN CALCULATIONS AND SUPERVISE THE PREPARATION OF SHOP DRAWINGS.

4. VERIFY THE EXACT LOCATION AND WEIGHT OF ALL MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR PRIOR TO FABRICATION OF JOISTS.

5. ALL HANGERS TO SUPPORT MECHANICAL EQUIPMENT, ETC., TO BE SUPPORTED BY THE TOP OR BOTTOM CHORD OF JOISTS SHALL BE LOCATED AT THE PANEL POINT OF THE JOIST. IF HANGERS MUST BE LOCATED IN BETWEEN PANEL POINTS, PROVIDE JOIST STIFFENER AS INDICATED IN DETAILS. ALL HANGERS TO BE LOCATED AT THE CENTERLINE OF THE BOTTOM CHORD MEMBER.

6. NO MODIFICATION THAT AFFECTS THE STRENGTH OF A STEEL JOIST SHALL BE MADE WITHOUT THE APPROVAL OF THE DELEGATED ENGINEER.

7. DELEGATED ENGINEER SHALL DESIGN JOISTS AND BRIDGING FOR GRAVITY LOADS AND WIND LOAD UPLIFT PRESSURES INDICATED ON THE DRAWINGS.

8. JOIST BRIDGING SHALL BE FURNISHED AND INSTALLED TO MEET THE DESIGN AND SPACING REQUIREMENTS OF THE SJI STANDARD SPECIFICATIONS. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOADS ARE PLACED ON THE JOISTS.

9. WHERE COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH SOLID WEB BEAMS, A STEEL JOIST SHALL BE FIELD-BOLTED AT THE COLUMN TO PROVIDE LATERAL STABILITY DURING ERECTION.

10. A 6"X6" MINIMUM VERTICAL STABILIZER PLATE TO RECEIVE THE JOIST BOTTOM CHORD MUST BE PROVIDED AT COLUMNS. THE STABILIZER PLATE MUST HAVE A 13/16 INCH HOLE FOR THE ATTACHMENT OF GUYING OR PLUMBING CABLES.

11. JOISTS AND ACCESSORIES SHALL HAVE ONE SHOP COAT OF PAINT MEETING THE MINIMUM PERFORMANCE REQUIREMENTS OF THE LATEST SJI SPECIFICATIONS. SEE ARCHITECT FOR PREFERRED COLOR.

12. SEE PLAN FOR ANY CONCENTRATED LOADS OR UNUSUAL CONDITIONS. ALL JOISTS SUBJECT TO SPECIAL LOADS OR CONDITIONS SHALL BE CONSIDERED "SPECIAL JOISTS", (SP).

13. CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS SHOWING JOISTS, BRIDGING, AND ALL CONNECTIONS. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY THE DELEGATED ENGINEER.

14. THE DELEGATED ENGINEER MUST BE PROVIDED WITH A COPY OF THESE DRAWINGS AND SPECIFICATIONS.

15. PROVIDE ONE ROW UPLIFT BRIDGING AT THE FIRST PANEL POINT FROM EACH SUPPORT.

16. A ROW OF BOLTED DIAGONAL BRIDGING MUST BE PROVIDED NEAR MIDSPAN OF ALL JOISTS SHOWN IN SJI TABLES A & B. DO NOT RELEASE HOISTING CABLES UNTIL THIS BRIDGING IS INSTALLED.

17. PROVIDE ONE ROW DIAGONAL BRIDGING AT THE SUPPORTS OF ALL FULL DEPTH BEARING JOISTS. DO NOT RELEASE HOISTING CABLES UNTIL THE SUPPORT BRIDGING IS INSTALLED.

18. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL PROVIDE MEANS FOR ADEQUATE DISTRIBUTION OF CONCENTRATED LOADS SO THAT THE CARRYING CAPACITY OF ANY JOIST IS NOT EXCEEDED.

19. ONE END OF ALL JOISTS SHALL BE ATTACHED TO ITS SUPPORT IN ACCORDANCE WITH SJI SPECIFICATIONS BEFORE ALLOWING THE WEIGHT OF AN ERECTOR ON THE JOISTS.

20. IN THE CASE OF BOTTOM CHORD BEARING JOISTS, THE ENDS OF THE JOIST MUST BE RESTRAINED LATERALLY BEFORE RELEASING THE HOISTING CABLES.

21. SEE STANDARD JOIST SPECIFICATIONS FOR CAMBER REQUIREMENTS.

22. SUBMIT COMPLETE SHOP DRAWINGS FOR ALL JOISTS AND ACCESSORIES, AND A LETTER, SIGNED AND SEALED BY THE DELEGATED ENGINEER, CONFIRMING COMPLIANCE WITH THE DESIGN CRITERIA AND ALL APPLICABLE CODES.

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Gulf Coast Hospital

REVISIONS:

No.	Description	Date

STRUCTURAL SPECIFICATIONS

PROJECT NUMBER	24107
DATED	03/28/2025

S-002

STRUCTURAL SPECIFICATIONS (CONTINUED)
METAL DECKING

1. METAL DECK WORK SHALL CONFORM TO THE REQUIREMENTS OF THE STEEL DECK INSTITUTE.
2. METAL ROOF DECK SHALL BE 50 KSI, 1 1/2" DEEP, WIDE RIB TYPE B AND GALVANIZED. (VULCRAFT 1.5B OR EQUIVALENT.)
3. FASTEN ROOF DECK AS INDICATED ON PLANS.
4. MINIMUM FASTENING AT BUILDING PERIMETER OF DECK SHALL BE 5/8" DIAMETER PUDDLE WELDS AT 6" O.C.
5. METAL DECK AND SHEET METAL COATING DESIGNATION:
   A) WITHOUT STRUCTURAL CONCRETE OR INSULATING CONCRETE TOPPING - G60
6. INSTALL ALL DECKING 3 SPAN CONTINUOUS.
7. USE WELD WASHERS FOR ALL DECKING 24 GA. AND THINNER.
8. DO NOT HANG OR ATTACH DUCTWORK, CONDUIT, PIPING, EQUIPMENT, CEILINGS, ETC. FROM METAL DECKING.
9. ROOF DECK OPENINGS 12" DIAMETER OR LARGER ARE TO HAVE SUPPORT ANGLES PER TYPICAL DECK OPENING DETAIL, INCLUDING OPENINGS FOR ROOF SUMP PANS.
10. PRIME AND PAINT ALL FIELD WELDS AFTER INSPECTION WITH A GALVANIZED TOUCH-UP PAINT. (SEE NOTE BELOW)
11. SUBMITTALS: CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS SHOWING LAYOUT OF DECK, TYPE OF DECK, ALL CONNECTIONS INCLUDING END WELDS, SEAM WELDS, INTERMEDIATE WELDS, AND ALL ACCESSORY MATERIAL SUCH AS CLOSURES, SUMPS FOR DRAINS, ETC.
12. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO VISUALLY INSPECT ALL DECK WELDS AND FASTENERS.

COLD-FORM STEEL FRAMING

1. STEEL FRAMING SHALL CONFORM TO THE A.I.S.I. "SPECIFICATION FOR THE DESIGN OF COLD_FORMED STEEL STRUCTURAL MEMBERS".
2. COLD-FORMED STEEL FRAMING SYSTEM, INCLUDING STUDS, TRUSSES, CONNECTIONS, AND ALL ACCESSORIES, SHALL BE DESIGNED BY A DELEGATED ENGINEER WHO SHALL PREPARE CALCULATIONS AND SUPERVISE THE PREPARATION OF SHOP DRAWINGS.
3. WELDED CONNECTIONS SHALL CONFORM TO "CODE FOR WELDING IN BUILDING CONSTRUCTION, AWS D1.3".
4. ASTM A_568 STANDARD SPECIFICATION FOR GENERAL REQUIREMENTS FOR STEEL, CARBON AND HIGH STRENGTH LOW_ALLOY HOT ROLLED SHEET AND COLD ROLLED SHEET.
5. ALL STEEL FRAMING SHALL BE INSTALLED BY PERSONNEL EXPERIENCED IN LIGHT GAUGE STEEL FRAMING INSTALLATION.
6. WHERE STEEL FRAMING MEMBERS ARE COMPONENTS OF ASSEMBLIES INDICATED FOR A FIRE_RESISTANCE RATING, INCLUDING THOSE REQUIRED FOR COMPLIANCE WITH GOVERNING REGULATIONS, PROVIDE MEMBERS WHICH HAVE BEEN APPROVED BY GOVERNING AUTHORITIES HAVING JURISDICTION.
7. PROTECT LIGHT GAUGE STEEL FRAMING MEMBERS FROM RUSTING AND DAMAGE. DELIVER TO PROJECT SITE IN BUNDLES, FULLY IDENTIFIED WITH NAME, BRAND, TYPE AND GRADE. STORE OFF GROUND IN A DRY VENTILATED SPACE OR PROTECT WITH SUITABLE WATERPROOF COVERINGS.
8. WITH EACH TYPE OF STEEL FRAMING REQUIRED, PROVIDE MANUFACTURER'S STANDARD STEEL RUNNERS (TRACKS), BLOCKING, LINTELS, CLIP ANGLES, BRACING, REINFORCEMENTS, FASTENERS, AND ACCESSORIES AS RECOMMENDED BY MANUFACTURER FOR APPLICATIONS INDICATED, AS NEEDED TO PROVIDE A COMPLETE STEEL FRAMING SYSTEM.
9. FABRICATE METAL FRAMING COMPONENTS OF STRUCTURAL QUALITY SHEET STEEL WITH A MINIMUM YIELD POINT OF 50,000 PSI FOR STUDS, AND 33,000 PSI FOR RUNNERS; ASTM A653.
10. PROVIDE GALVANIZED FINISH TO METAL FRAMING COMPONENTS COMPLYING WITH ASTM A525 WITH A G60 COATING.
11. PROVIDE MANUFACTURER'S STANDARD STRUCTURAL "CEE" SHAPED STEEL STUDS OF SIZE, SHAPE, AND GAUGE INDICATED, WITH A NOMINAL 1_5/8" FLANGE AND MINIMUM 1/2" FLANGE RETURN LIP BY DIETRICH INDUSTRIES, INC. OR PRIOR APPROVED EQUAL.
12. THE EXTERIOR WALL SYSTEM SHALL BE DESIGNED TO WITHSTAND BOTH POSITIVE AND NEGATIVE WIND PRESSURE WITH A MAXIMUM DEFLECTION BASED UPON THE APPLICABLE CODE AND MATERIAL REQUIREMENTS OF THE VENEER, BUT SHALL NOT EXCEED L/360.
13. FRAMING COMPONENTS MAY BE PREFABRICATED INTO PANELS PRIOR TO ERECTION. FABRICATE PANELS PLUMB, SQUARE, TRUE TO LINE AND BRACED AGAINST RACKING WITH JOINTS WELDED. PERFORM LIFTING OF PREFABRICATED PANELS IN A MANNER TO PREVENT DAMAGE OR DISTORTION.
14. INSTALL METAL FRAMING SYSTEMS IN ACCORDANCE WITH REVIEWED SHOP DRAWINGS.
15. INSTALL CONTINUOUS TRACKS SIZED TO MATCH STUD DEPTH. ALIGN TRACKS ACCURATELY TO LAYOUT AT BASE AND TOPS OF STUDS. SECURE TRACKS AS RECOMMENDED BY STUD MANUFACTURER FOR TYPE OF CONSTRUCTION INVOLVED, EXCEPT DO NOT EXCEED 24" O.C. SPACING FOR NAIL OR POWDER_DRIVEN FASTENERS, OR 16" O.C., FOR OTHER TYPES OF ATTACHMENT. PROVIDE FASTENERS AT CORNERS AND ENDS OF TRACKS.
16. FRAME BOTH SIDES OF EXPANSION AND CONTROL JOINTS, AS SHOWN FOR THE WALL SYSTEM, WITH SEPARATE STUDS AND DO NOT BRIDGE THE JOINT WITH COMPONENTS OF THE STUD SYSTEM.
17. WHERE REQUIRED, TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED.
18. RESISTANCE TO BENDING AND ROTATION ABOUT THE MINOR AXIS SHALL BE PROVIDED BY MECHANICAL LATERAL BRACING WHERE REQUIRED.
19. ATTACHMENTS OF SIMILAR COMPONENTS SHALL BE DONE BY WELDING, SCREW ATTACHMENT, OR BOLTING. WIRE TYING OF FRAMING COMPONENTS SHALL NOT BE PERMITTED.
20. WELDING OF MEMBERS LIGHTER THAN 18 GAUGE SHALL NOT BE PERMITTED.
21. SPLICES SHALL NOT BE PERMITTED.
22. MINIMUM NUMBERS OF EQUALLY SPACED JOIST BRIDGING FOR THE SPANS SHOWN:
    UP TO 14' _ 1 ROW
    14' TO 20' _ 2 ROWS
    20' TO 26' _ 3 ROWS
    26' TO 32' _ 4 ROWS
    OVER 32' _ AT 8' CENTERS
23. PROVIDE HORIZONTAL BLOCKING BETWEEN EACH STUD AT 4'-0" ON CENTER MAXIMUM OR AT EACH SHEATHING JOINT.
24. FULLY INSTALL ALL BRIDGING BEFORE APPLYING LOADS.
25. JOIST SHALL BEAR DIRECTLY ON STUDS UNLESS HEADERS ARE USED.
26. PROVIDE JOIST WEB STIFFENERS WHERE JOIST BEARING IS LESS THAN 3_1/2".
27. CONTRACTOR TO SUBMIT THE FOLLOWING:
    A) SUBMIT COMPLETE STRUCTURAL CALCULATIONS FOR THE STEEL FRAMING SYSTEM. CALCULATIONS SHALL COVER ALL STUDS, JAMB STUDS, RUNNER TRACK, BRACING, ATTACHMENT OF LIGHT GAUGE FRAMING TO LIGHT GAUGE FRAMING, AND ATTACHMENT OF LIGHT GAUGE FRAMING TO CONCRETE OR STRUCTURAL STEEL.
    B) SUBMIT DETAILED SHOP DRAWINGS FOR STEEL FRAMING SHOWING THE TYPE AND SPACING OF ALL MEMBERS. ALL ATTACHMENTS SHALL BE CLEARLY DETAILED ON THE DRAWINGS. INDICATED SUPPLEMENTAL STRAPPING, BRACING, CLIPS, AND OTHER ACCESSORIES REQUIRED FOR PROPER INSTALLATION.
    C) SUBMIT CERTIFICATION OF MATERIALS FROM THE MANUFACTURER TO SHOW COMPLIANCE WITH THESE SPECIFICATIONS AND RELATED DRAWINGS.
28. SUBMITTALS SHALL BEAR THE SEAL OF THE DELEGATED ENGINEER.
29. SUBMITTED SHOP DRAWINGS MUST BE CHECKED AND SIGNED BY THE GENERAL CONTRACTOR.

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REVISIONS:

No.	Description	Date

STRUCTURAL SPECIFICATIONS

PROJECT NUMBER	24107
DATED	03/28/2025

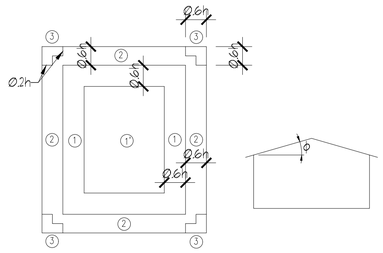
S-003

WIND LOAD TABLES

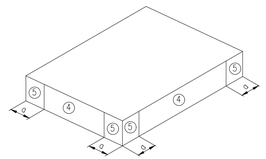
GROSS ULTIMATE WIND LOADS MAIN ROOF ROOFING MATERIALS				
COMPONENTS AND CLADDING	ROOF ZONE			
	1'	1	2	3
PRESSURE (psf)	17.4	17.4	17.4	17.4
SUCTION (psf)	(-) 39.2	(-) 68.2	(-) 90.0	(-) 123

GROSS ULTIMATE WIND LOADS MAIN ROOF JOISTS				
COMPONENTS AND CLADDING	ROOF ZONE			
	1'	1	2	3
PRESSURE (psf)	13.8	13.8	13.8	13.8
SUCTION (psf)	(-) 29.0	(-) 47.4	(-) 63.2	(-) 69.1

ULTIMATE WIND PRESSURES (PSF) EXTERIOR DOORS, WINDOWS, WALLS				
EFFECTIVE AREA (ft^2)	ZONE 4		ZONE 5	
	PRESSURE	SUCTION	PRESSURE	SUCTION
1 TO 20	39.2	(-) 42.4	39.2	(-) 52.2
21 TO 50	37.3	(-) 40.6	37.3	(-) 48.5
51 TO 100	35.1	(-) 38.4	35.1	(-) 41.1
101 TO 150	33.4	(-) 36.7	33.4	(-) 40.7
151 TO 250	32.4	(-) 35.6	32.4	(-) 38.6
251 TO 500	32.1	(-) 34.4	31.1	(-) 36.1
501 + ABOVE	29.4	(-) 32.7	29.4	(-) 32.7



FLAT ROOF ($\phi \leq 7°$)



DOORS, WINDOWS AND WALLS

COMPONENT AND CLADDING LOADING DIAGRAMS

1. a = 3'-0"
2. THIS BUILDING IS DESIGNED AS AN ENCLOSED STRUCTURE. ALL EXTERIOR COMPONENTS (DOORS, WINDOWS, ETC.) MUST BE DESIGNED TO WITHSTAND THE WIND LOADINGS SPECIFIED FOR THE DESIGN OF COMPONENTS AND CLADDING IN THE TABLES. IN ADDITION, ALL AREAS OF EXTERIOR GLAZING MUST BE CERTIFIED FOR MISSILE IMPACT OR PROTECTED BY WIND-BORNE DEBRIS BY A SCREEN BARRIER.
3. TO CONVERT THE (ASCE 7-22) ULTIMATE WIND PRESSURES IN THE TABLES ABOVE TO (ASD) WIND PRESSURES, MULTIPLY EACH VALUE BY 0.6.

CONCRETE BEAM TENSION LAP SPLICE SCHEDULE				
BAR SIZE	LOCATION	CONCRETE STRENGTH		
		3,000 PSI	4,000 PSI	5,000 PSI
# 4	TOP BARS	37"	32"	29"
	OTHER BARS	29"	25"	22"
# 5	TOP BARS	47"	40"	36"
	OTHER BARS	36"	31"	28"
# 6	TOP BARS	56"	48"	43"
	OTHER BARS	43"	37"	33"
# 7	TOP BARS	81"	70"	63"
	OTHER BARS	63"	54"	49"
# 8	TOP BARS	93"	80"	72"
	OTHER BARS	72"	62"	55"
# 9	TOP BARS	105"	91"	81"
	OTHER BARS	81"	70"	63"
# 10	TOP BARS	118"	102"	91"
	OTHER BARS	91"	79"	70"

NOTES:
1. BASED ON NORMAL WEIGHT CONCRETE & GRADE 60 REINFORCING BARS.
2. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
3. FOR LIGHTWEIGHT AGGREGATE, MULTIPLY ABOVE VALUES BY 1.3.

CONCRETE BEAM TENSION LAP SPLICE SCHEDULE 1

VERTICAL REINFORCEMENT BAR LAP SCHEDULE			
BAR SIZE	CLASS "B" TENSION LAP		
	3,000 PSI	4,000 PSI	5,000 PSI
# 5	36"	31"	28"
# 6	43"	37"	33"
# 7	63"	54"	49"
# 8	72"	62"	55"
# 9	81"	70"	63"
# 10	91"	79"	70"

NOTES:
1.BASED ON NORMAL WEIGHT CONCRETE & GRADE 60 REINFORCING BARS.

VERTICAL REINFORCEMENT BAR LAP SCHEDULE - CONCRETE 2

MASONRY REINF. LAP SCHEDULE	
BAR SIZE	LAP LENGTH
#3 BAR	20"
#4 BAR	26"
#5 BAR	32"
#6 BAR	43"
#7 BAR	60"

VERTICAL REINFORCEMENT BAR LAP SCHEDULE - MASONRY 3

BRICK LINTEL SCHEDULE		
SPANS	STEEL LINTEL	END BRG.
UP TO 2'-0" (INCL.)	3½"x3⅜" FLAT BAR	6" EA. END
2'-0" TO 4'-0" (INCL.)	L3½"x3½"x5⁄16"	8" EA. END
4'-0" TO 6'-0" (INCL.)	L4"x3½"x5⁄16" (L.L.V.)	10" EA END
6'-0" TO 8'-0" (INCL.)	L5"x3½"x5⁄16" (L.L.V.)	12" EA. END
8'-0" TO 10'-0" (INCL.)	L5"x3½"x5⁄16" (L.L.V.)	14" EA. END
10'-0" TO 12'-0" (INCL.)	L6"x3½"x5⁄16" (L.L.V.)	16" EA. END
12'-0" TO 14'-0" (INCL.)	L6"x3½"x5⁄16" (L.L.V.)	16" EA. END

BRICK LINTEL SCHEDULE 4

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Outpatient Rehabilitation & Diagnostic Center
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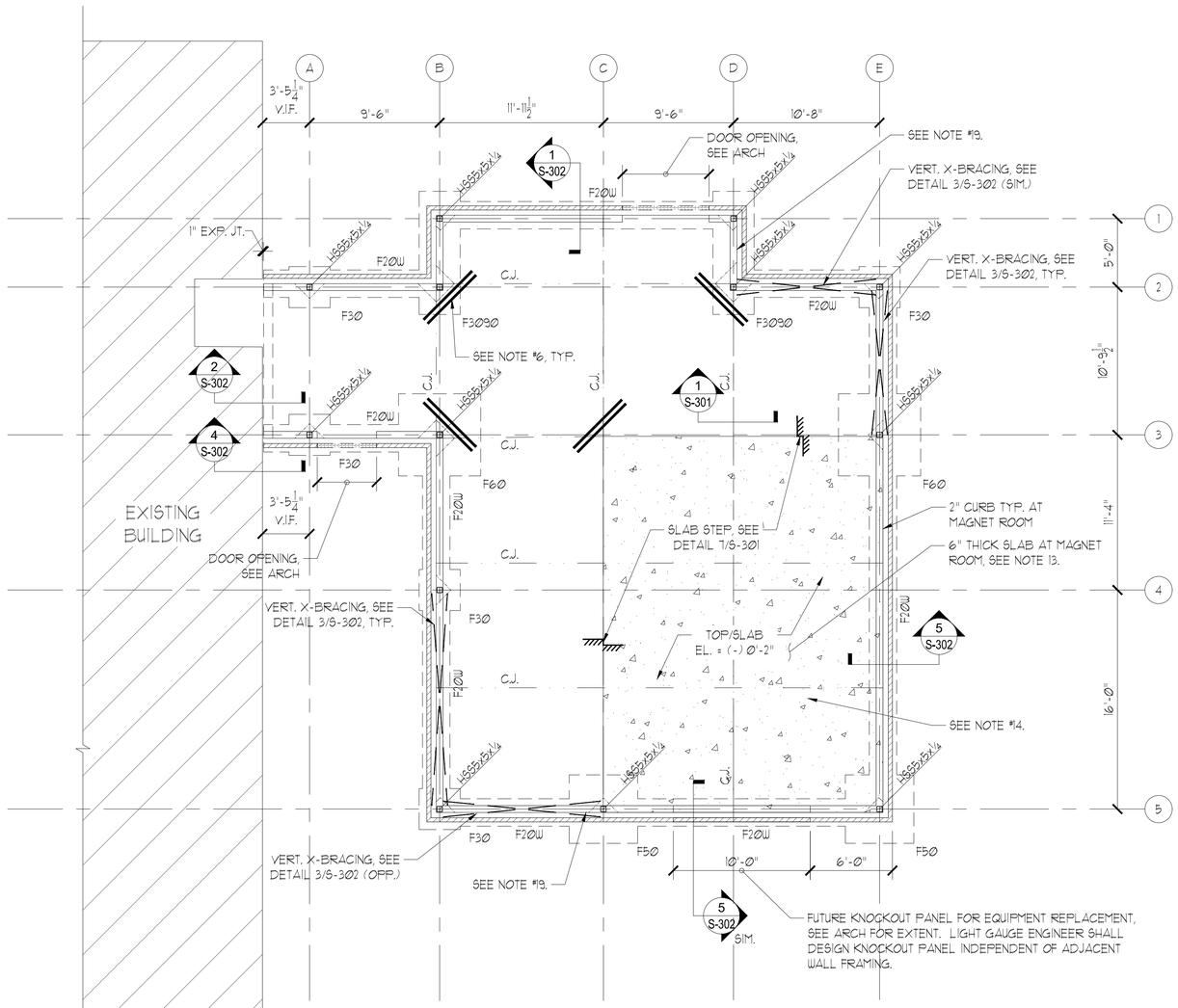
REVISIONS:

No.	Description	Date

WIND TABLES AND SCHEDULES

PROJECT NUMBER 24107
DATED 03/28/2025

S-004



FOUNDATION PLAN

SCALE : 3/16" = 1'-Ø"

FOUNDATION DESIGN IS SUBJECT TO CHANGE PENDING THE RECEIPT OF THE FINAL SIGNED AND SEALED GEOTECHNICAL REPORT.

FOUNDATION PLAN NOTES:

1. TOP OF SLAB ELEVATION = SEE PLAN AND ARCH.
2. TOP OF EXTERIOR FTG = (-1'-4") U.N.O STEP AS REQ'D FOR FINAL GRADING.
3. BOT OF FTG @ EXISTING = MATCH EXISTING
4. CENTER ALL FOOTINGS UNDER COLUMNS, WALLS, AND PIERS, U.N.O..
5. SLAB-ON-GRADE SHALL BE 4" THICK CONCRETE REINFORCED WITH FIBROUS REINFORCING U.N.O. ON 10 MIL VAPOR RETARDER. LAP AND TAPE SEAMS OVER 6" MIN. CRUSHED ROCK BASE (CAPILLARY WATER BARRIER) OVER COMPACTED SOIL. SEE ARCHITECT FOR EXTENT OF TERMITE TREATMENT.
6. (2) #4 x 5'-0" DIAGONAL BARS MID-DEPTH OF SLAB TYPICAL
7. SEE ARCHITECTURAL AND PLUMBING DRAWINGS FOR DETAILS AND LOCATIONS OF FLOOR DRAINS AND OTHER FEATURES.
8. REFER TO S-001, S-002 AND S-003 FOR SPECIFICATIONS.
9. GENERAL CONTRACTOR TO COORDINATE EXTERIOR FOOTING ELEVATIONS WITH ACTUAL FIELD CONDITIONS AND CIVIL TO PROVIDE A MINIMUM 12" SOIL COVERAGE OVER FOOTINGS. STEP FOOTINGS AS REQUIRED PER 3/S-301.
10. REFER TO S-301 AND S-302 FOR FOUNDATION DETAILS.
11. REFER TO S-101 FOR FOOTING SCHEDULE.
12. REFER TO S-004 FOR ALL LAP SCHEDULES.
13. ▭ INDICATES 6" SLAB-ON-GRADE REINFORCED WITH FIBROUS REINFORCING ON 10 MIL VAPOR RETARDER. LAP AND TAPE SEAMS OVER 6" MIN. CRUSHED ROCK BASE (CAPILLARY WATER BARRIER) OVER COMPACTED SOIL.
14. MAGNET ROOM SLAB SHALL MEET ALL FLATNESS CRITERIA REQUIRED BY THE MRI EQUIPMENT MANUFACTURER AND/OR SHIELDING ENCLOSURE DESIGNER/INSTALLER, WHICHEVER IS MORE STRINGENT.
15. ALL WALL FOOTINGS TO BE F20W U.N.O.
16. C.J. = CONTROL/CONTRACTION JOINT, SEE DETAIL 1/S-301.
17. MRI EQUIPMENT BASIS OF DESIGN IS THE GE HEALTHCARE SIGNA ARTIST 1.5T.
18. ▨ INDICATES BRICK VENEER, ATTACH TO METAL STUD FRAMING WITH BRICK TIES AT 16" O.C. E.A. WAY. SEE ARCH FOR EXTENT.
19. EXTERIOR WALLS TO BE PRE-ENGINEERED MIN. 6" (16GA) METAL STUD FRAMING @ 16" O.C. MAX. PROVIDE HORIZONTAL BLOCKING AT 4'-Ø" O.C. VERT.

FOOTING SCHEDULE

MARK	SIZE	DEPTH	REINF. EA. WAY	REMARKS	DWL/A.B. EMBEDMENT
F20W	2'-Ø"	1'-Ø"	(3) #5 CONT. #5@12" TRANSV.	WALL FTG.	9"
F30	3'-Ø"x3'-Ø"	1'-Ø"	(3) #5	BOT. BARS	9"
F50	5'-Ø"x5'-Ø"	1'-Ø"	(5) #5	BOT. BARS	9"
F60	6'-Ø"x6'-Ø"	1'-2"	(7) #5	BOT. BARS	11"
F30Ø30	3'-Ø"x9'-Ø"	1'-Ø"	(4) #5 LONG (8) #5 SHORT	TOP & BOT.	9"

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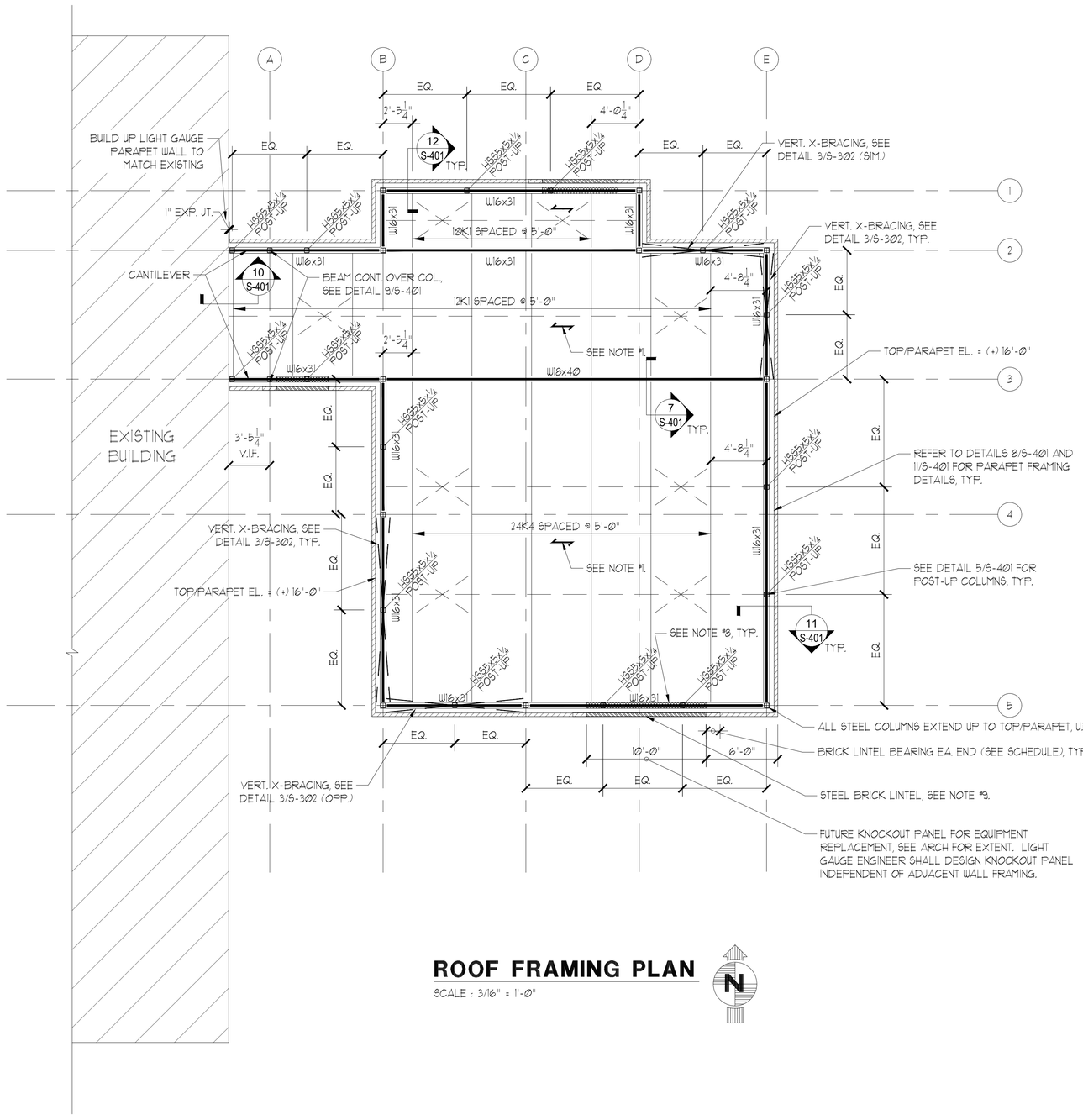
FOUNDATION PLAN

PROJECT NUMBER 24107
DATED 03/28/2025

S-101



ROOF FRAMING PLAN

SCALE : 3/16" = 1'-0"

ROOF FRAMING PLAN NOTES:

1. METAL ROOF DECK TO BE 1½" DP. (22) GA. GALVANIZED TYPE "B", INSTALLED (3) SPAN MIN. FASTEN DECK (5) ⅝"ø PUDDLE WELD PATTERN AT EACH SUPPORT AND (6) #10 TEK SIDELAP FASTENERS FOR 36" WIDE DECKING. SEE 6/S401. (⟷ INDICATES DIRECTION OF DECK SPAN)
2. ROOF JOISTS ARE EQUALLY SPACED BETWEEN SUPPORTS. TYPICAL AS INDICATED ON PLANS.
3. ROOF SLOPE = FLAT, SLOPE ROOFING MATERIAL AS REQ. FOR DRAINAGE, SEE ARCH.
4. REFER TO ARCH. FOR DIMENSIONS AND ELEVATIONS.
5. REFER TO SHEET S-001, S-002, AND S-003 FOR STRUCTURAL SPECIFICATIONS.
6. WALL FRAMING TO BE MIN. 6" 16 GA. PRE-ENGINEERED INFILL METAL STUD FRAMING @ 16" O.C. MAX. PROVIDE HORIZONTAL BLOCKING AT 4'-0" O.C. VERTICAL.
7. SEE SHEET S-401 AND S-402 FOR FRAMING DETAILS.
8. ▩ INDICATES WINDOW/DOOR OPENING IN LIGHT GAUGE WALL. DELEGATED ENGINEER TO PROVIDE LIGHT GAUGE HEADER BEAM AS REQUIRED.
9. ▨ INDICATES STEEL ANGLE BRICK LINTEL FOR OPENING BELOW. SEE SCHEDULE ON SHEET S-004 AND ARCH FOR OPENING EXTENTS AND ELEVATION.
10. TOP OF STEEL BEAM = JOIST BRG. ELEV. = (+) 14'-0", U.N.O.

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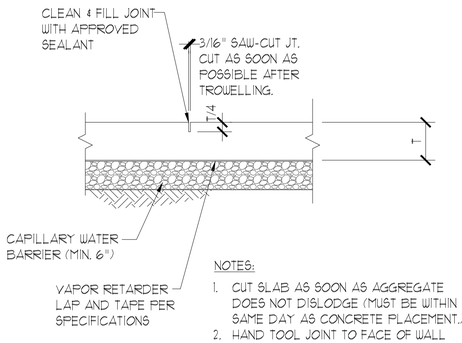
ROOF FRAMING PLAN

PROJECT NUMBER 24107
DATED 03/28/2025

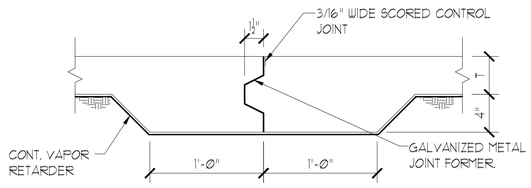
S-201

22017
CONSTRUCTION DWGS
2025-03-28



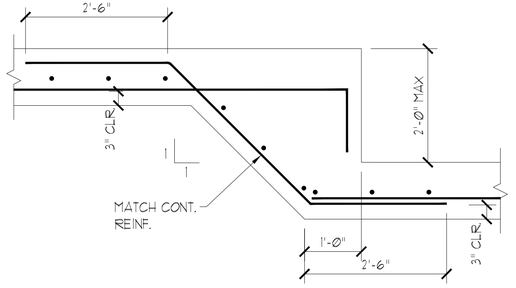
NOTES:
1. CUT SLAB AS SOON AS AGGREGATE DOES NOT DISLODGE (MUST BE WITHIN SAME DAY AS CONCRETE PLACEMENT.)
2. HAND TOOL JOINT TO FACE OF WALL WHERE SAWCUT DOES NOT REACH.

CONTRACTION JOINT W/ WWF
SCALE: 1 1/2" = 1'-0" — 1

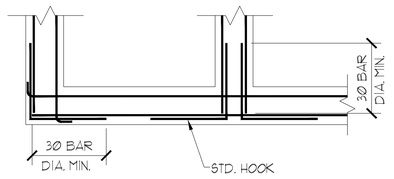


NOTE :
1. TO BE USED AT CONTRACTOR'S OPTION AT ANY CONTROL JOINT LOCATION.
2. POUR SLABS IN ALTERNATING LONG STRIPS. DO NOT POUR IN A CHECKER BOARD PATTERN.

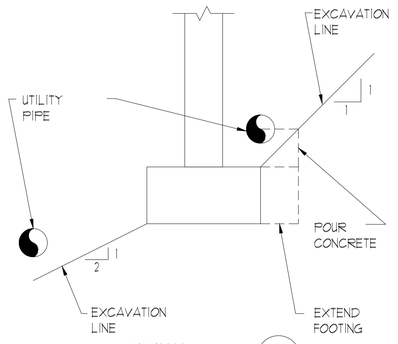
CONSTRUCTION JOINT
SCALE: 1 1/2" = 1'-0" — 2



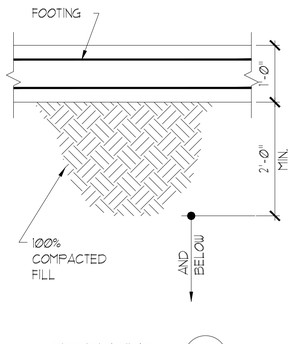
STEPPED FOOTING
3



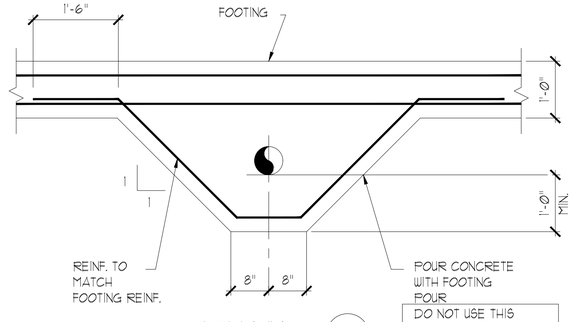
TYPICAL WALL AND FTG. REINF. INTERSECTIONS
4



PARALLEL TO WALL — A

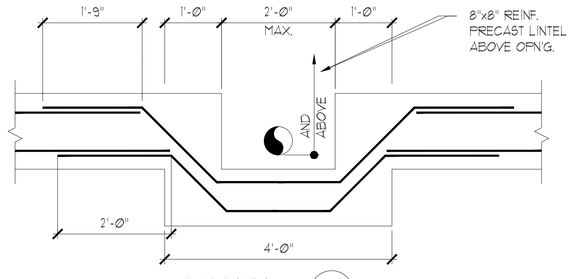


PERPENDICULAR TO FOOTING — B



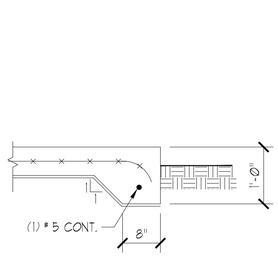
DO NOT USE THIS DETAIL WITH PVC PIPE

PERPENDICULAR TO FOOTING — C

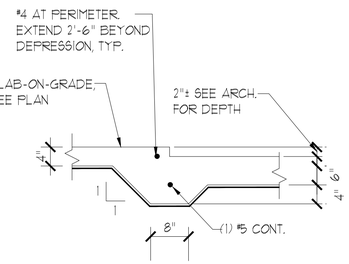


PERPENDICULAR TO FOOTING — D

FOOTING FOR PIPES PASSING UNDER OR ADJACENT TO WALLS
5

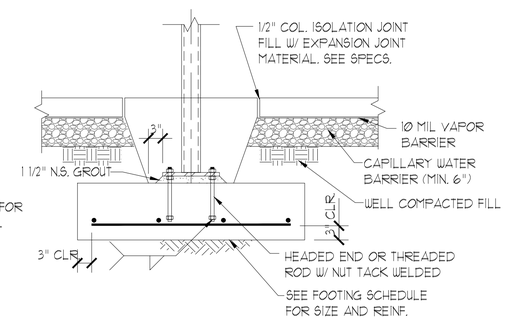


THICKENED SLAB EDGE
6

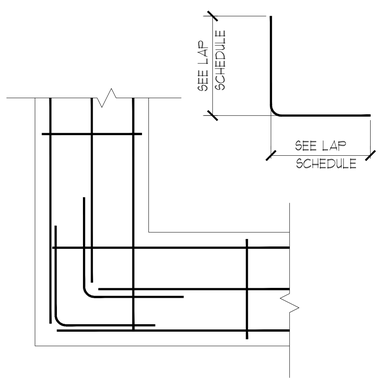


SLAB RECESS
7

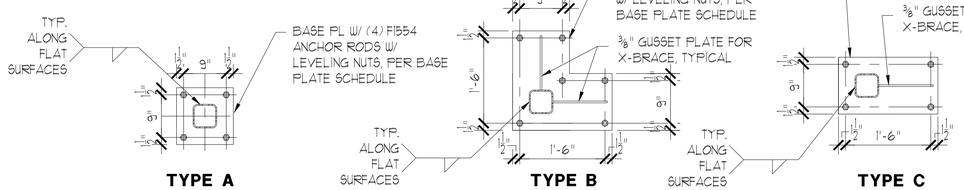
BASE PLATE TABLE					
COLUMN SIZE	LOCATION	BASE PL	ANCHOR BOLTS	EDGE DISTANCE	REMARKS
HSS 5x5x¼	W/O X-BRACING	¾"x12"x1'-0"	(4) ¾" DIA.	1½"	TYPE A
HSS 5x5x¼	AT CORNER W/ X-BRACING	SEE DIAGRAM	(6) ¾" DIA.	1½"	TYPE B
HSS 5x5x¼	EXTERIOR W/ X-BRACING	SEE DIAGRAM	(4) ¾" DIA.	1½"	TYPE C



COLUMN FOOTING
8



CORNER BAR DETAIL AT FOUNDATION
9



TYPE A — TYPE B — TYPE C

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FOUNDATION DETAILS

PROJECT NUMBER 24107
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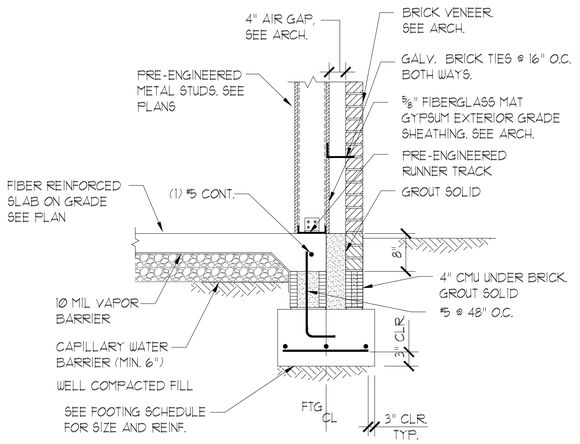
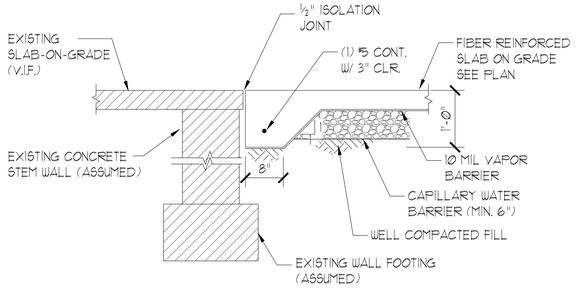
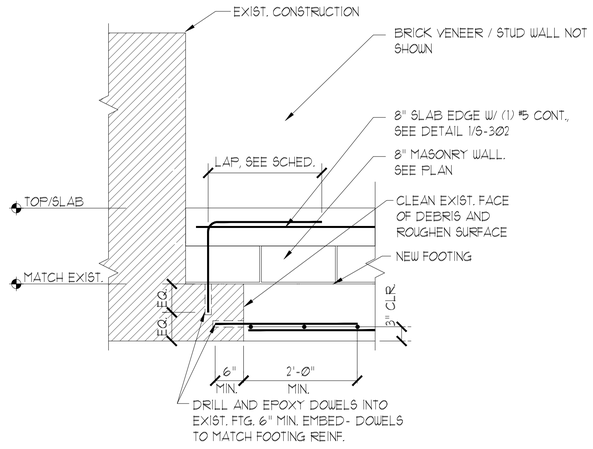
S-301



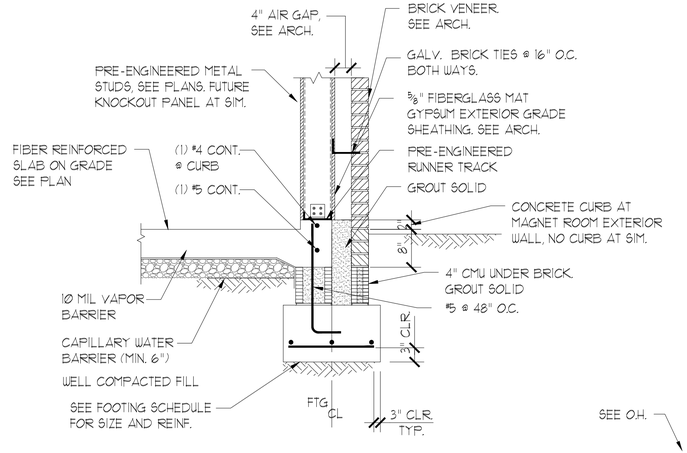
TYPICAL WALL FOOTING DETAIL 1



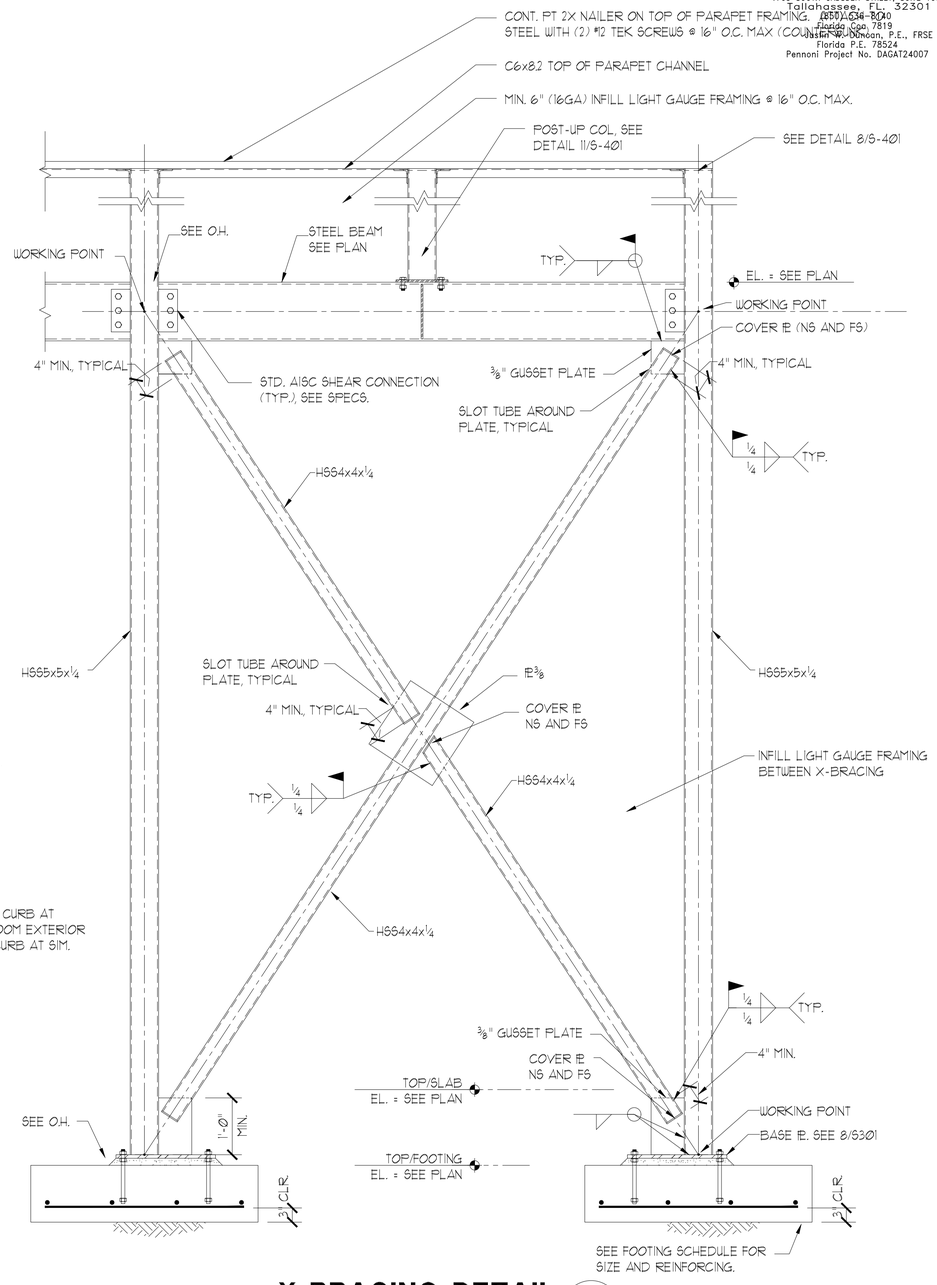
SLAB EDGE DETAIL AT EXISTING 2



NEW/EXISTING FOUNDATION 4



WALL FOOTING DETAIL W/ CURB 5



X-BRACING DETAIL 3

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FOUNDATION DETAILS

PROJECT NUMBER	24107
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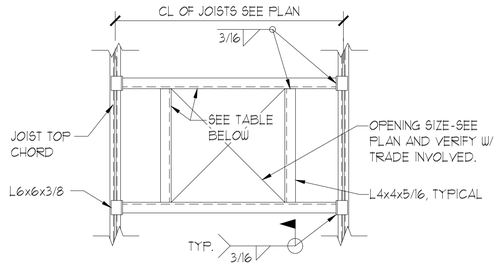
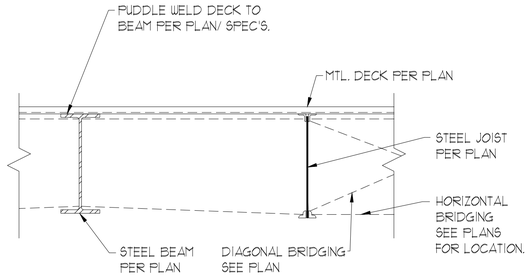
S-302

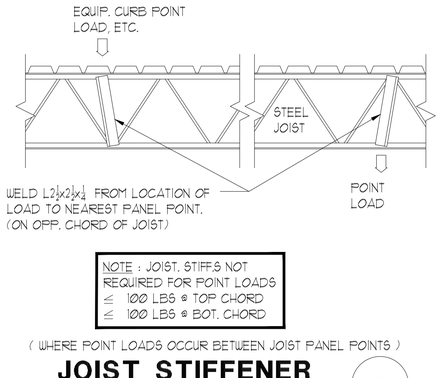


1. LOCATE ANGLES BELOW ALL EQUIP. CURBS AND AROUND ALL ROOF OPENINGS.
2. CONTRACTOR SHALL VERIFY LOCATION & SIZE OF OPENINGS PRIOR TO STEEL FABRICATION.
3. FRAME I6 REQ'D FOR OPENING 1'-Ø" & GREATER.

ROOF OPENING FRAMING 1



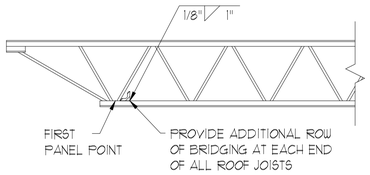
DECK BEARING 2



NOTE : JOIST STIFFS NOT REQUIRED FOR POINT LOADS
≤ 100 LBS @ TOP CHORD
≤ 100 LBS @ BOT. CHORD

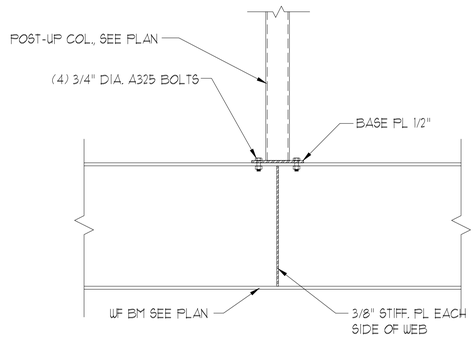
(WHERE POINT LOADS OCCUR BETWEEN JOIST PANEL POINTS)

JOIST STIFFENER 3

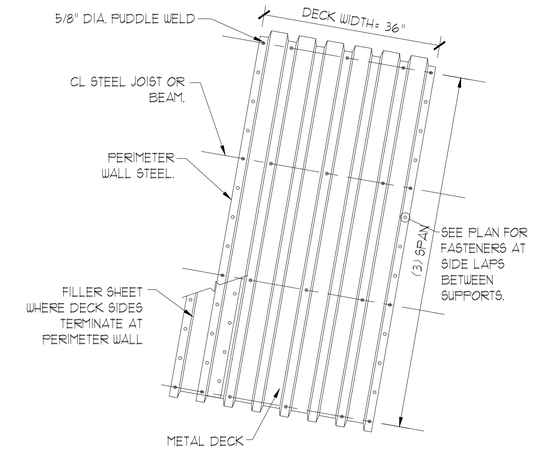


UPLIFT BRIDGING 4

(ROOF JOISTS ONLY)

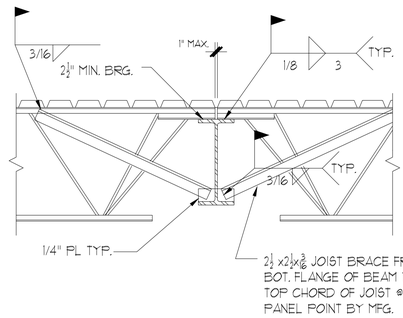


POST-UP COL. FROM BEAM 5

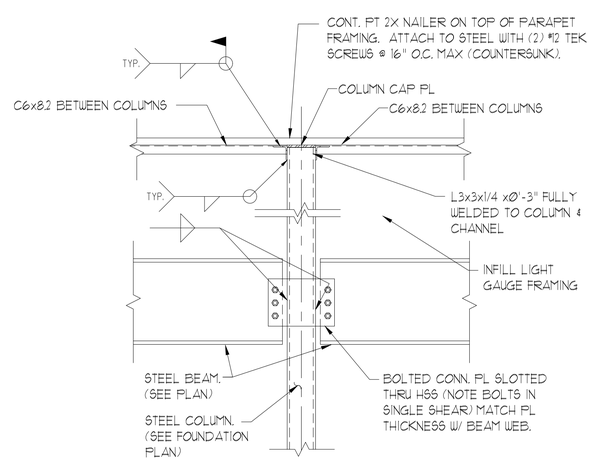


ROOF DECK FASTENERS 6

WHEN DECK STARTER SHEET LOW LIP IS WELDED TO PERIMETER AT 1'-Ø" O.C. STEEL FILLER SHEET IS NOT REQUIRED.

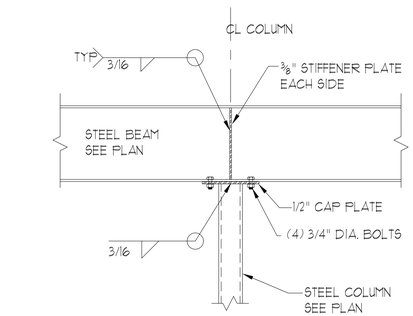


JOIST BEARING AT STEEL BEAM 7

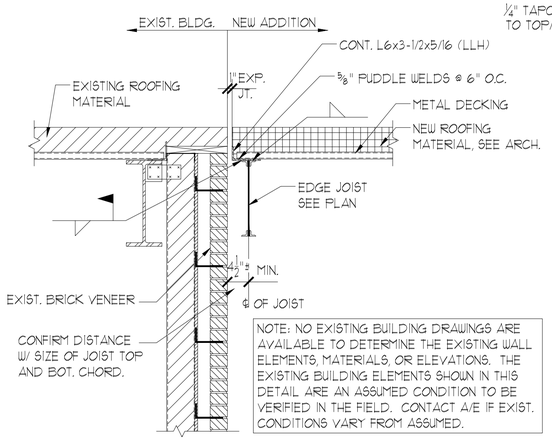


UPLIFT BRIDGING 4

(ROOF JOISTS ONLY)

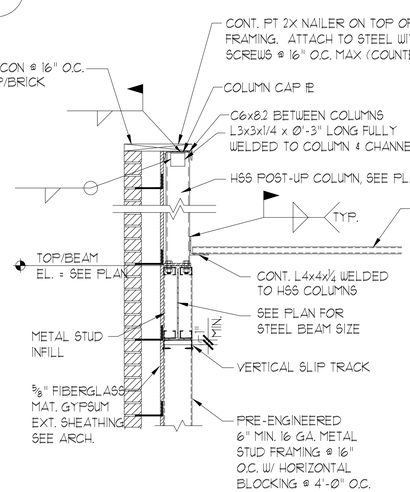


BEAM TO COLUMN CONN. 9

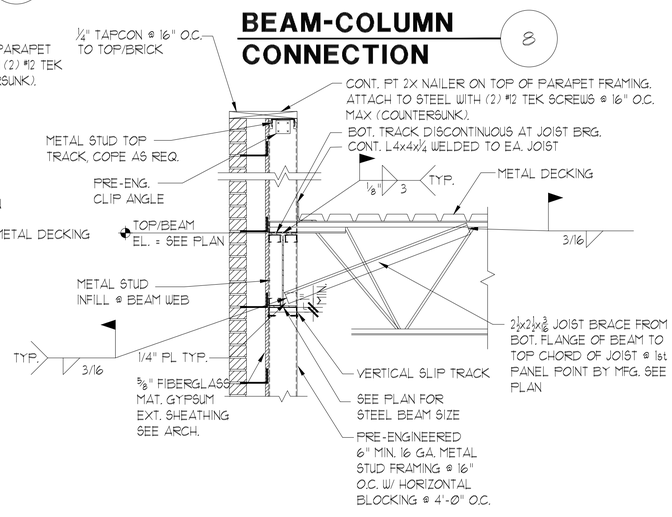


NOTE: NO EXISTING BUILDING DRAWINGS ARE AVAILABLE TO DETERMINE THE EXISTING WALL ELEMENTS, MATERIALS, OR ELEVATIONS. THE EXISTING BUILDING ELEMENTS SHOWN IN THIS DETAIL ARE AN ASSUMED CONDITION TO BE VERIFIED IN THE FIELD. CONTACT A/E IF EXIST. CONDITIONS VARY FROM ASSUMED.

ROOF EDGE DETAIL 10



ROOF EDGE DETAIL 11



BEAM-COLUMN CONNECTION 8

ROOF EDGE DETAIL 12

Pennoni
1705 SOUTH GADSDEN STREET, SUITE 100
Tallahassee, FL. 32301
(850) 536-8140
Florida Coa 7819
Justin W. Duncan, P.E., FRSE
Florida P.E. 78524
Pennoni Project No. DAGAT24007

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BID DOCUMENTS

HCA FLORIDA GULF COAST HOSPITAL
Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

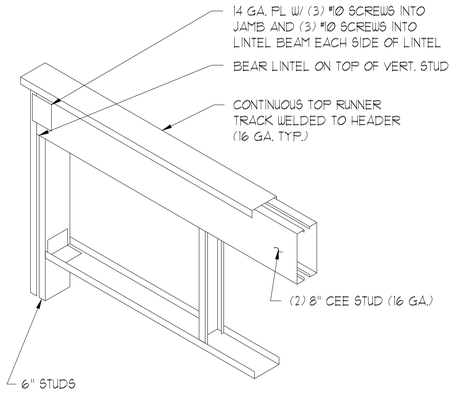
No.	Description	Date

FRAMING DETAILS

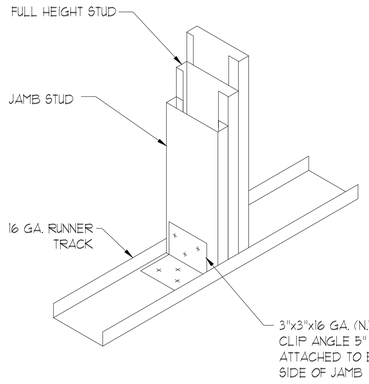
PROJECT NUMBER	24107
DATED	03/28/2025

S-401

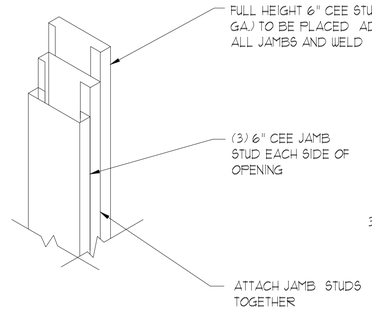
22017
CONSTRUCTION DWGS
2025-03-28



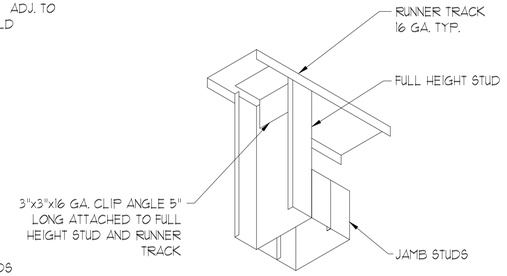
HEADER DETAIL 1



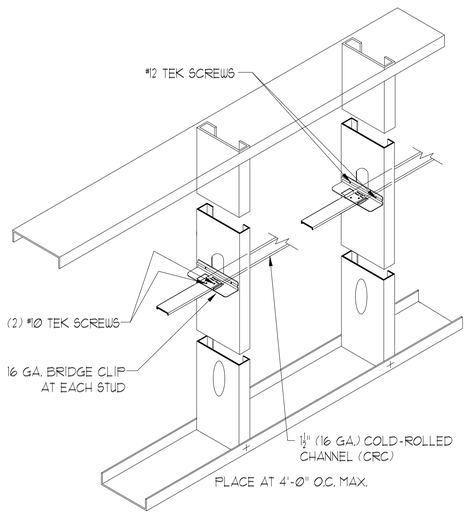
JAMB ANCHOR DETAIL 2



TYPICAL JAMB DETAIL 3

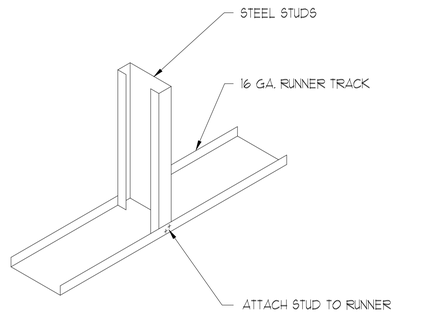


JAMB ANCHORAGE DETAIL 4

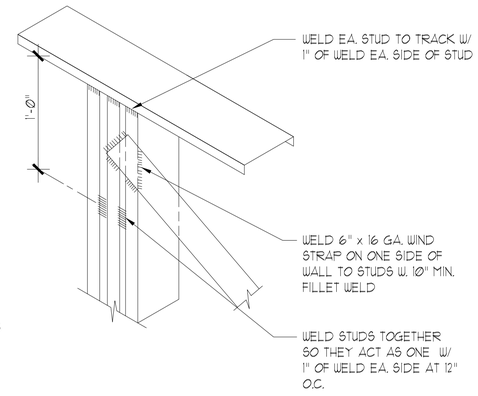


LATERAL BRACING 5

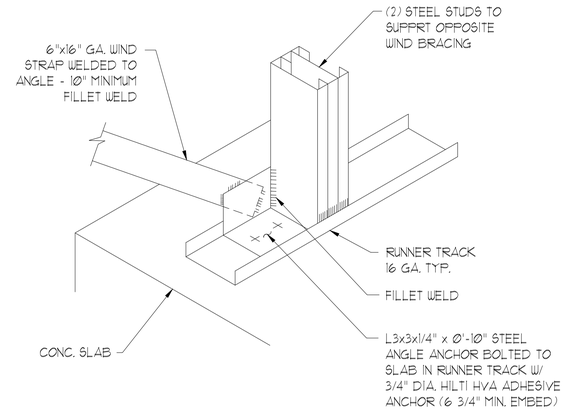
ALL LIGHT GAUGE METAL STUD FRAMING DETAILS ARE SCHEMATIC AND ARE FOR PRELIMINARY PRICING ONLY. FINAL DETAILS SHALL BE PROVIDED BY THE DELEGATED LIGHT GAUGE ENGINEER. SUBMIT S&S DRAWINGS AND CALCULATIONS PER THE SPECS.



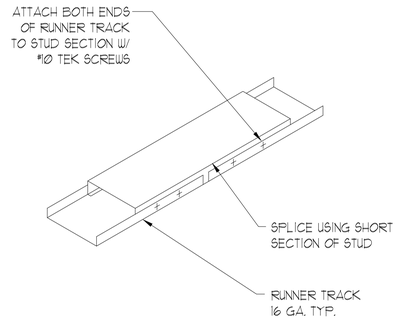
TYP. STUD ANCHORAGE 6



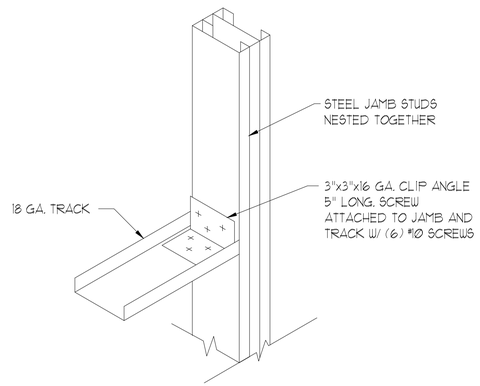
WIND STRAP ANCHORAGE 7



WIND STRAP ANCHORAGE 8



TYP. RUNNER TRACK SPLICE 9



HEAD AND/OR SILL DETAIL 10

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1705 SOUTH GADSDEN STREET, SUITE 100
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BID DOCUMENTS

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI
ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

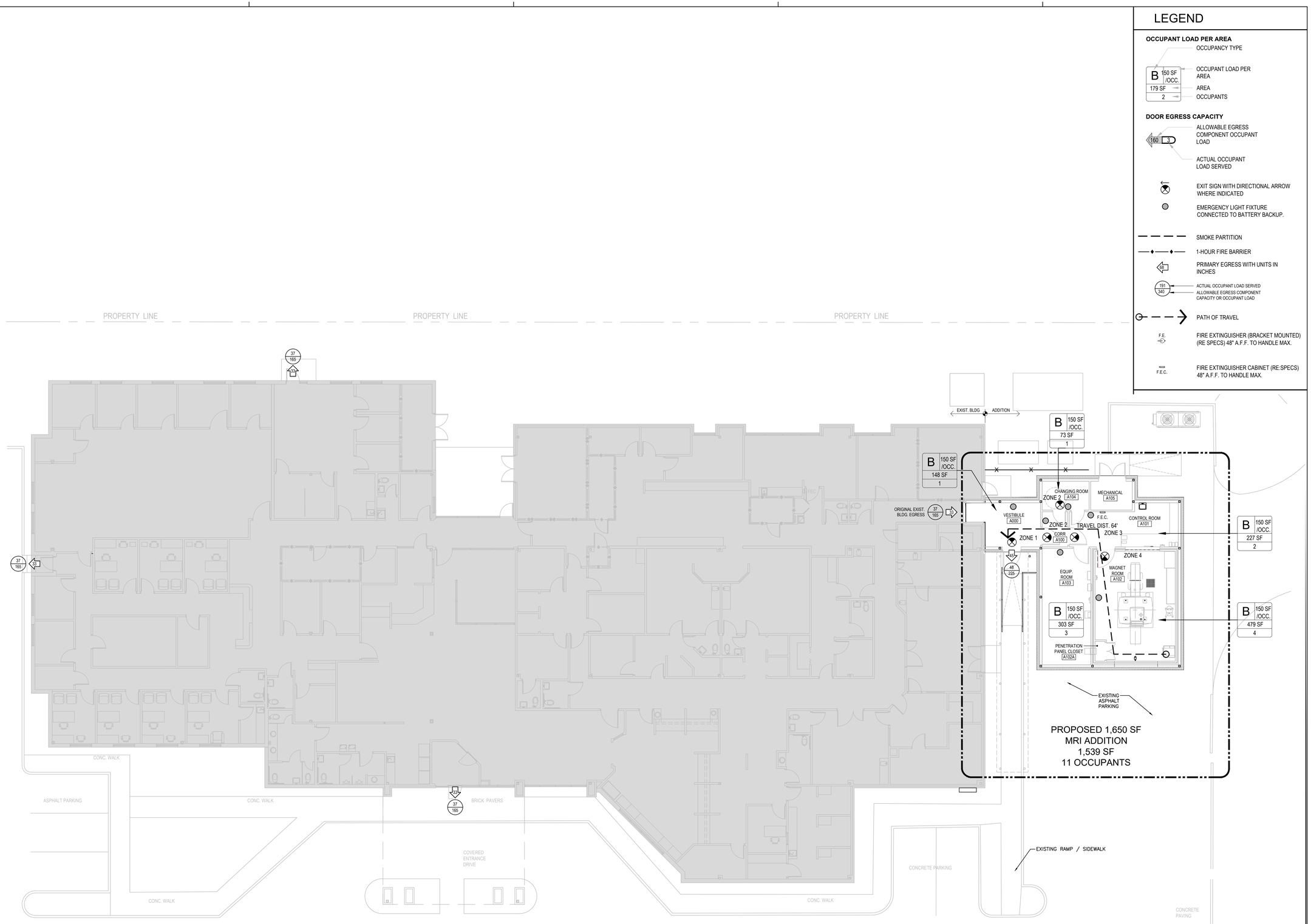
No.	Description	Date

COLD FORMED STEEL FRAMING

PROJECT NUMBER	24107
DATED	03/28/2025

S-501

24107
BID DOCUMENTS
2025-04-04



LEGEND

OCCUPANT LOAD PER AREA

- OCCUPANCY TYPE
- B | 150 SF /OCC. — OCCUPANT LOAD PER AREA
- 179 SF — AREA
- 2 — OCCUPANTS

DOOR EGRESS CAPACITY

- 160 | 3 — ALLOWABLE EGRESS COMPONENT OCCUPANT LOAD / ACTUAL OCCUPANT LOAD SERVED
- EXIT SIGN WITH DIRECTIONAL ARROW WHERE INDICATED
- EMERGENCY LIGHT FIXTURE CONNECTED TO BATTERY BACKUP.
- SMOKE PARTITION
- 1-HOUR FIRE BARRIER
- 48 — PRIMARY EGRESS WITH UNITS IN INCHES
- 191 / 340 — ACTUAL OCCUPANT LOAD SERVED / ALLOWABLE EGRESS COMPONENT CAPACITY OR OCCUPANT LOAD
- PATH OF TRAVEL
- F.E. — FIRE EXTINGUISHER (BRACKET MOUNTED) (RE SPECS) 48" A.F.F. TO HANDLE MAX.
- F.E.C. — FIRE EXTINGUISHER CABINET (RE:SPECS) 48" A.F.F. TO HANDLE MAX.

A1	LIFE SAFETY PLAN
SCALE: 3/32" = 1'-0"	

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HCA Florida
Gulf Coast Hospital

REVISIONS:

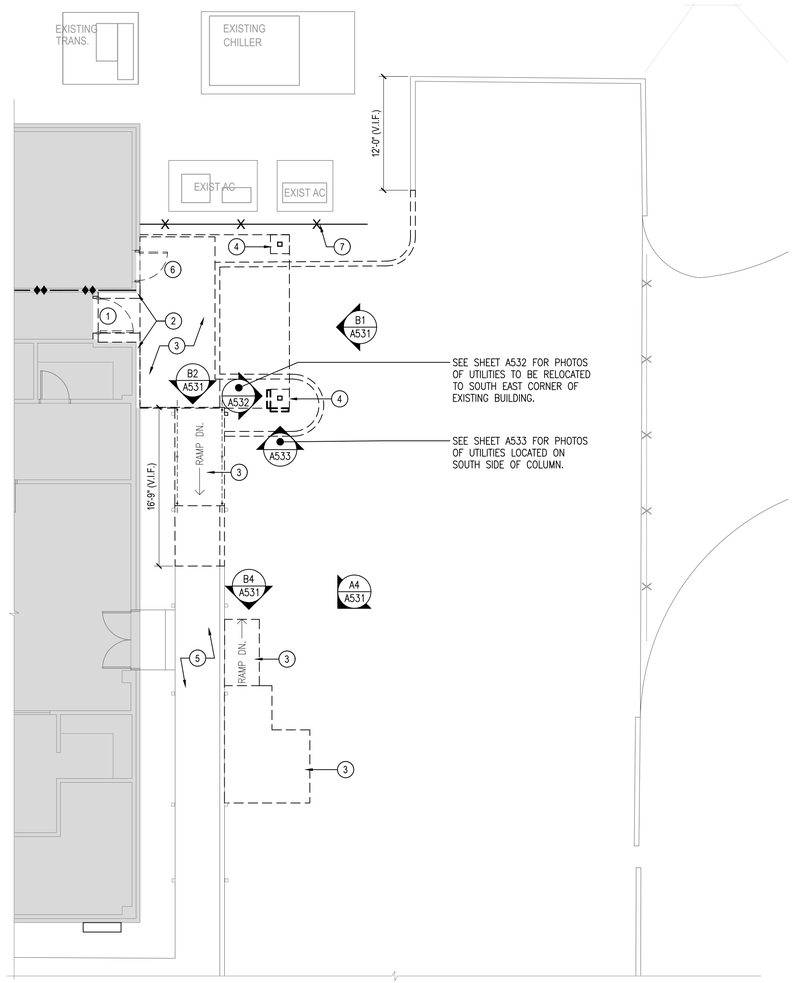
No.	Description	Date

LIFE SAFETY PLAN

PROJECT NUMBER	**24107**
DATED	03/28/2025

LS001

24107
BID DOCUMENTS
2025-04-04

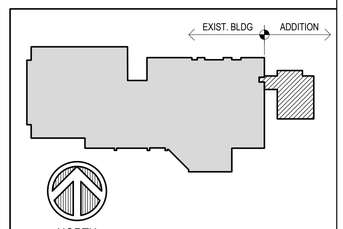


DEMOLTION NOTES

1. REMOVE EXIST DOOR AND FRAME IN ITS ENTIRETY, PREP OPENING TO ACCEPT NEW WORK
2. DEMOLISH BRICK VENEER AND WALL TIES TO EXTENT INDICATED, PREP TO ACCEPT NEW WORK
3. DEMOLISH CONCRETE SIDEWALK, CURB, AND RAMP TO EXTENT INDICATED
4. DEMOLISH BRICK-FACE COVERED ENTRY, COLUMNS, AND FOUNDATION AS REQUIRED TO COMPLETE NEW WORK. SEE ENGINEERING DRAWINGS.
5. EXISTING SIDEWALK TO REMAIN
6. REMOVE EXISTING DOOR AND FRAME IN ITS ENTIRETY, PREP ROUGH OPENING TO ACCEPT NEW GHM DOOR AND FRAME ASSEMBLY
7. REMOVE EXISTING WOOD PRIVACY FENCE IN IT'S ENTIRETY.

NORTH

A1 DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



A5 KEY PLAN
SCALE: NTS

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

DEMOLITION PLAN

PROJECT NUMBER	24107
DATED	03/28/2025

AD101

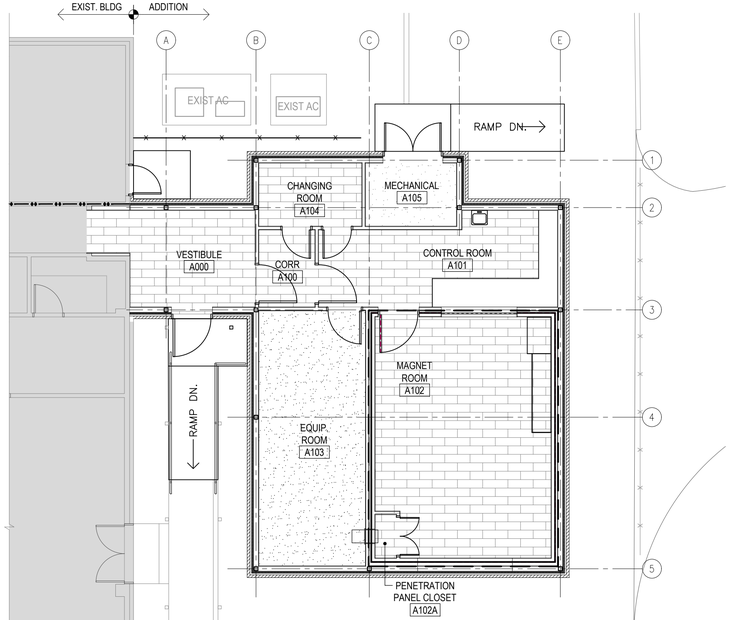
24107
BID DOCUMENTS
2025-04-04

ROOM NO.	ROOM NAME	SPL	FINISH MATERIAL	MANUFACTURER	COLLECTION / SERIES	PRODUCT NAME	COLOR	REMARKS
FLOOR								
A000	VESTIBULE	T-1	MATCH EXISTING	DALTILE	TBD	TBD	TBD	
A100	CORRIDOR	XX	LVT-1	TARKETT				
A101	CONTROL ROOM	XX	LVT-1	TARKETT				
A102	MAGNET ROOM	XX	LVT-1	TARKETT				FINISH ONLY SIBLING WALL INSIDE MAGNET ROOM
A102A	PENETRATION PANEL CLOSET	XX	LVT-1	TARKETT				FINISH ONLY SIBLING WALL INSIDE MAGNET ROOM
A103	EQUIPMENT ROOM	CONC.	SEALED CONC.					
A104	CHANGING ROOM	XX	LVT-1	TARKETT				
A105	MECHANICAL	CONC.	SEALED CONC.					
BASE								
A000	VESTIBULE	TB-1	MATCH EXISTING	DALTILE	TBD	TBD	TBD	
A100	CORRIDOR	RB-1	RUBBER	TARKETT				
A101	CONTROL ROOM	RB-1	RUBBER	TARKETT				
A102	MAGNET ROOM	RB-1	RUBBER	TARKETT				FINISH ONLY SIBLING WALL INSIDE MAGNET ROOM
A102A	PENETRATION PANEL CLOSET	RB-1	RUBBER	TARKETT				FINISH ONLY SIBLING WALL INSIDE MAGNET ROOM
A103	EQUIPMENT ROOM	RB-1	RUBBER	TARKETT				
A104	CHANGING ROOM	RB-1	RUBBER	TARKETT				
A105	MECHANICAL							
WALL FINISH								
A000	VESTIBULE	P-2	PAINT	SHERWIN WILLIAMS	TBD	XX	TBD	PATCH AND REPAIR EXISTING MATERIALS IF NECESSARY
A100	CORRIDOR	P-2	PAINT	SHERWIN WILLIAMS	TBD		TBD	
A101	CONTROL ROOM	P-1	PAINT	SHERWIN WILLIAMS	TBD		TBD	
A102	MAGNET ROOM	P-1	PAINT	SHERWIN WILLIAMS	TBD		TBD	
A102A	PENETRATION PANEL CLOSET	P-1	PAINT	SHERWIN WILLIAMS	TBD		TBD	
A103	EQUIPMENT ROOM	P-2	PAINT	SHERWIN WILLIAMS	TBD		TBD	
A104	CHANGING ROOM	P-2	PAINT	SHERWIN WILLIAMS	TBD		TBD	
A105	MECHANICAL		PAINT	SHERWIN WILLIAMS	TBD		TBD	
CEILING								
A000	VESTIBULE	ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	TBD	TBD	TBD	
A100	CORRIDOR	ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	TBD	TBD	TBD	
A101	CONTROL ROOM	ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	TBD	TBD	TBD	
A102	MAGNET ROOM	ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	TBD	TBD	TBD	FINISH ONLY SIBLING WALL INSIDE MAGNET ROOM
A102A	PENETRATION PANEL CLOSET	ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	TBD	TBD	TBD	FINISH ONLY SIBLING WALL INSIDE MAGNET ROOM
A103	EQUIPMENT ROOM	XX						
A104	CHANGING ROOM	ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	TBD	TBD	TBD	
A105	MECHANICAL	XX						
OTHER								
#	XX	GR-1	GROUT	TBD	TBD		TBD	
#	XX	GR-2	GROUT		PAINT			
#	XX	XX	T-1		WT			

ROOM FINISH GENERAL NOTES:
1. ALL COLORS AND PRODUCT MANUFACTURERS TO BE DETERMINED, AND ARE TO BE IN ACCORDANCE WITH THE GCSC DESIGN STANDARDS FOR NEW CONSTRUCTION; IF IN DOUBT, COORDINATE WITH ARCHITECT, OWNER AND TENANT.
2. ALIGN FLOORING CHANGES WITH CORNER OF WALL, WHERE APPLICABLE.
3. PROVIDE FLOORING TRANSITION STRIPS AT CHANGE IN FLOORING.
4. CONTRACTOR TO PREP EXISTING WALL SURFACES TO ACCEPT NEW FINISH WORK.

A3 FINISH SCHEDULE

SCALE: 1/8" = 1'-0"



GENERAL NOTES

1. CONTRACTORS SHALL COORDINATE ALL WORK, SHOWN OR UN-SHOWN, WITH ALL OTHER DISCIPLINES.
2. CONTRACTOR SHALL PROVIDE REINFORCING [TYPE TBD] BEHIND ALL CEILING MOUNTED EQUIPMENT.
3. REFER TO FINISH SCHEDULE(S) ADDITIONAL INFORMATION.
4. ALL ACCESS PANEL SIZES AND LOCATIONS TO BE COORDINATED WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE SPRINKLER WORK.
5. CENTER ACT GRID AND LIGHTS WITHIN EACH ROOM, UNO.
6. REFER TO ELECTRICAL FOR LIGHTING FIXTURE SCHEDULE(S).
7. ALL FIRE SPRINKLER HEADS AND ELECTRICAL FIXTURES SHALL BE CENTERED WITHIN CEILING TILES, UNO.
8. CEILING HEIGHTS NOTED REFERENCE ELEVATION ABOVE FINISH FLOOR OF ASSOCIATED BUILDING LEVEL.

FLOORING LEGEND

- SEALED CONCRETE
- LVT

A2 FINISH PLAN

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. CONTRACTORS SHALL COORDINATE ALL WORK, SHOWN OR UN-SHOWN, WITH ALL OTHER DISCIPLINES.
2. CONTRACTOR SHALL PROVIDE REINFORCING [TYPE TBD] BEHIND ALL CEILING MOUNTED EQUIPMENT.
3. REFER TO FINISH SCHEDULE(S) ADDITIONAL INFORMATION.
4. ALL ACCESS PANEL SIZES AND LOCATIONS TO BE COORDINATED WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE SPRINKLER WORK.
5. CENTER ACT GRID AND LIGHTS WITHIN EACH ROOM, UNO.
6. REFER TO ELECTRICAL DOCUMENTS FOR SPECIFIC FIXTURE TYPES.
7. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

RCP NOTES

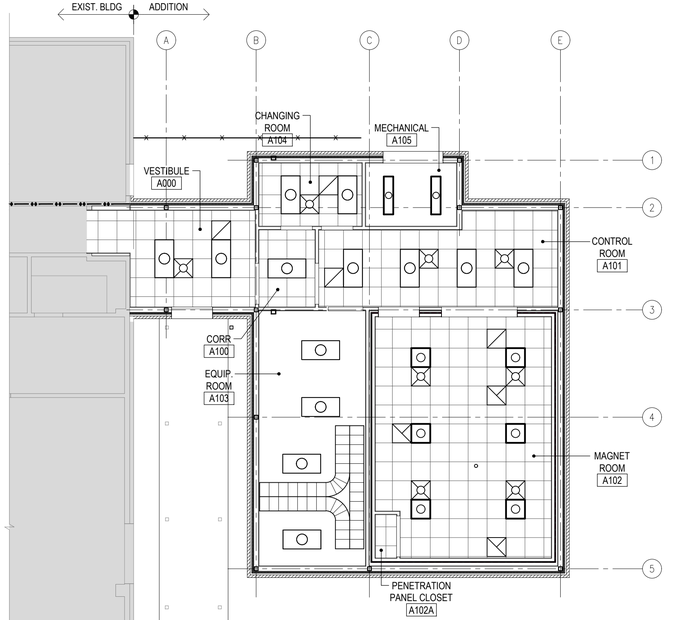
1. SEE FINISH SCHEDULE FOR CEILING HEIGHTS.
2. REFER TO ELECTRICAL DOCUMENTS FOR SPECIFIC FIXTURE TYPES.
3. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

LEGEND

- EXPOSED STRUCTURE (NO CEILING) WALLS TO EXTEND TO UNDERSIDE OF STRUCTURE
- SUSPENDED ACOUSTICAL CEILING TILE (ACT)
- GYPSUM BOARD CEILING OR SOFFIT (GYP.BD.)
- EXTERIOR WALL MOUNTED FIXTURE– REFER TO ELECTRICAL DWGS
- WALL MOUNTED FIXTURE– REFER TO ELECTRICAL DWGS
- RECESSED FIXTURE– REFER TO ELECTRICAL DWGS
- RECESSED 2X4 LIGHT FIXTURE– REFER TO ELECTRICAL DRAWINGS
- RECESSED 2x2 LIGHT FIXTURE– REFER TO ELECTRICAL DRAWINGS
- SURFACE MOUNTED LED LIGHT FIXTURE– REFER TO ELECTRICAL DRAWINGS
- WALL MOUNTED EXIT LIGHT– REFER TO ELECTRICAL DRAWINGS
- CEILING MTD. EXIT LIGHT w/DIRECTIONAL ARROW– REFER TO ELECTRICAL DRAWINGS
- WALL MOUNTED EXIT LIGHT W/EMER. LIGHTING– REFER TO ELECTRICAL DRAWINGS
- HVAC EXHAUST AIR GRILLE– REFER TO MECHANICAL DWGS
- HVAC RETURN AIR GRILLE– REFER TO MECHANICAL DWGS
- HVAC SUPPLY DIFFUSER– REFER TO MECHANICAL DWGS
- WALL MOUNTED EMERGENCY LIGHT– REFER TO ELECTRICAL DRAWINGS
- CABLE TRAY (EXPOSED)

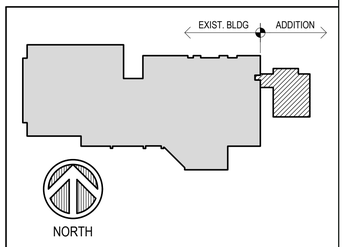
A1 REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"



A5 KEY PLAN

SCALE: NTS



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BID DOCUMENTS

HCA FLORIDA GULF COAST HOSPITAL
Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

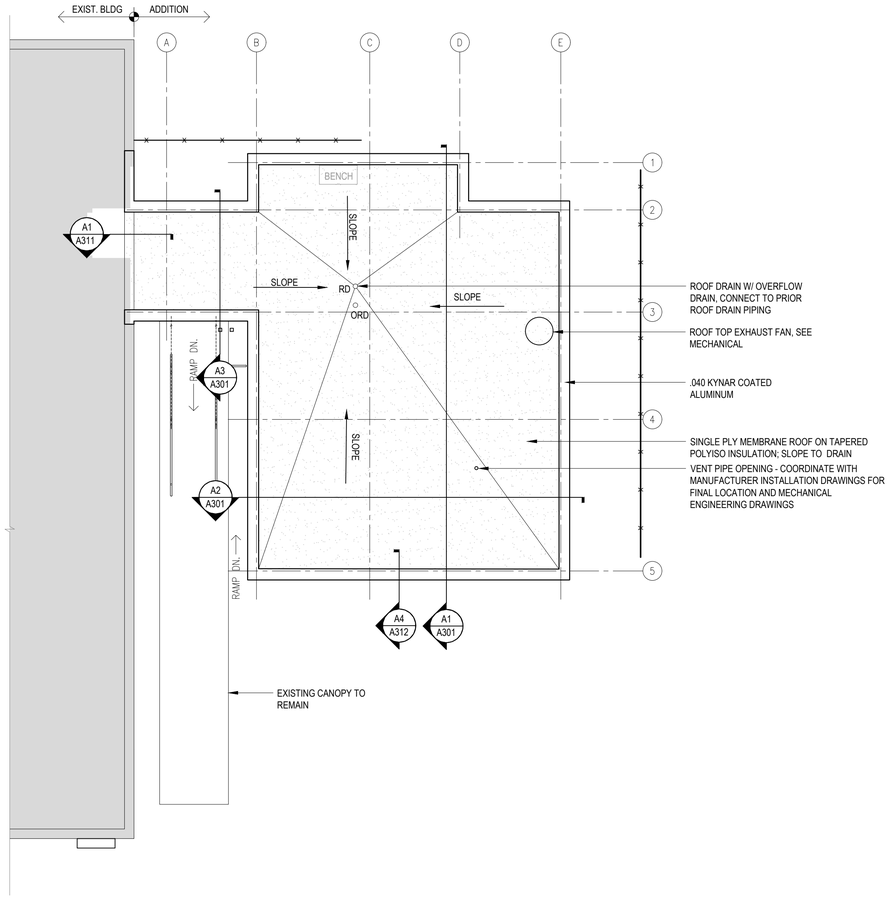
No.	Description	Date

REFLECTED CLG. PLAN, FINISH PLAN & FINISH SCHEDULE

PROJECT NUMBER	24107
DATED	03/28/2025

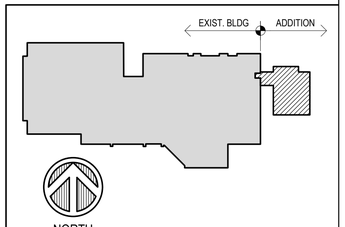
A-111

24107
BID DOCUMENTS
2025-04-04



NORTH

A1	ROOF PLAN
SCALE: 1/8" = 1'-0"	



NORTH

A5	KEY PLAN
SCALE: NTS	

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

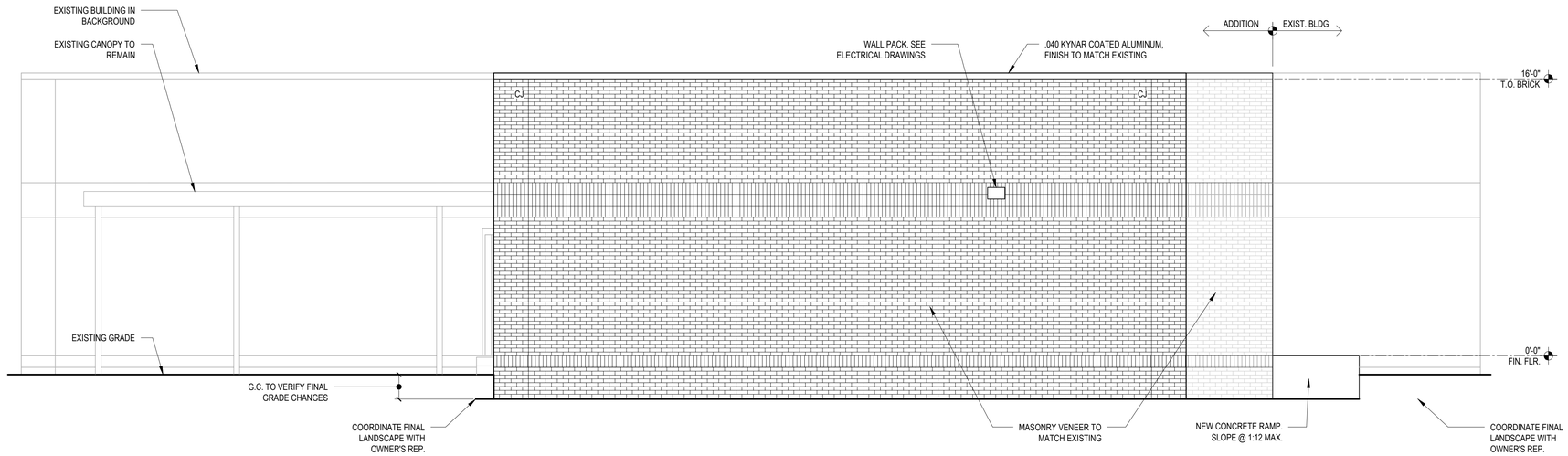
No.	Description	Date

ROOF PLAN

PROJECT NUMBER	24107
DATED	03/28/2025

A-121

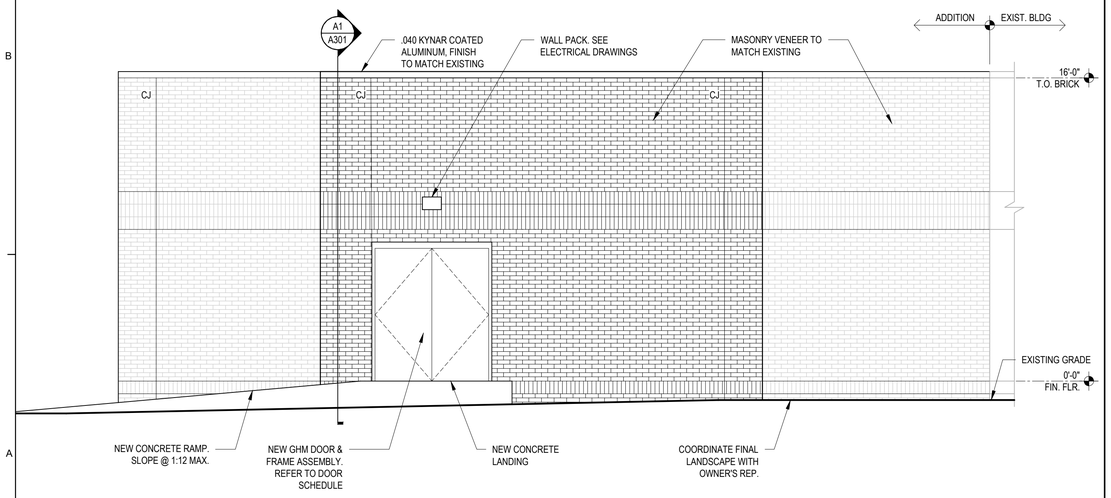
24107
BID DOCUMENTS
2025-04-04



ALL BRICK AND MORTAR TO MATCH EXISTING

C1 EAST ELEVATION

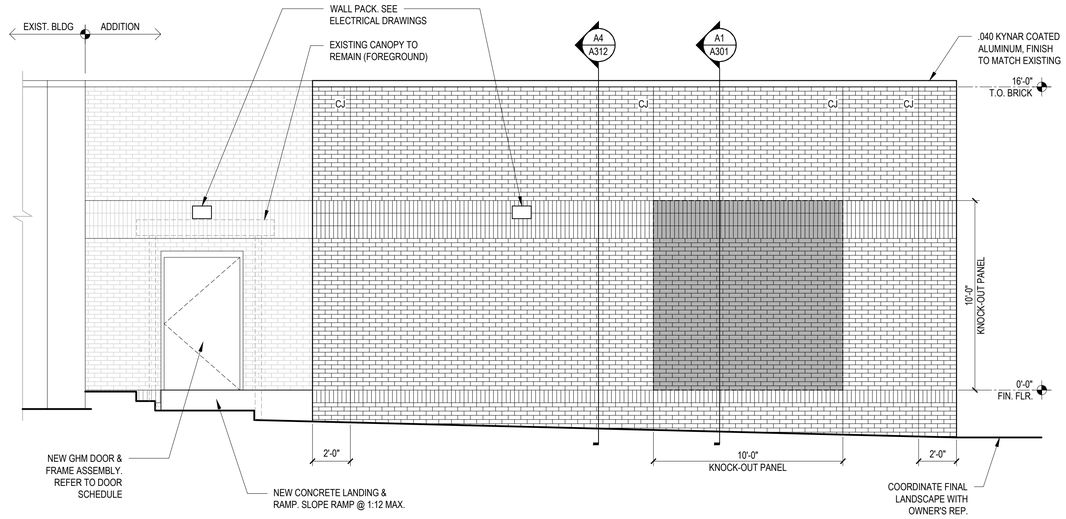
SCALE: 1/4" = 1'-0"



ALL BRICK AND MORTAR TO MATCH EXISTING

A1 NORTH ELEVATION

SCALE: 1/4" = 1'-0"



ALL BRICK AND MORTAR TO MATCH EXISTING

A3 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

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DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

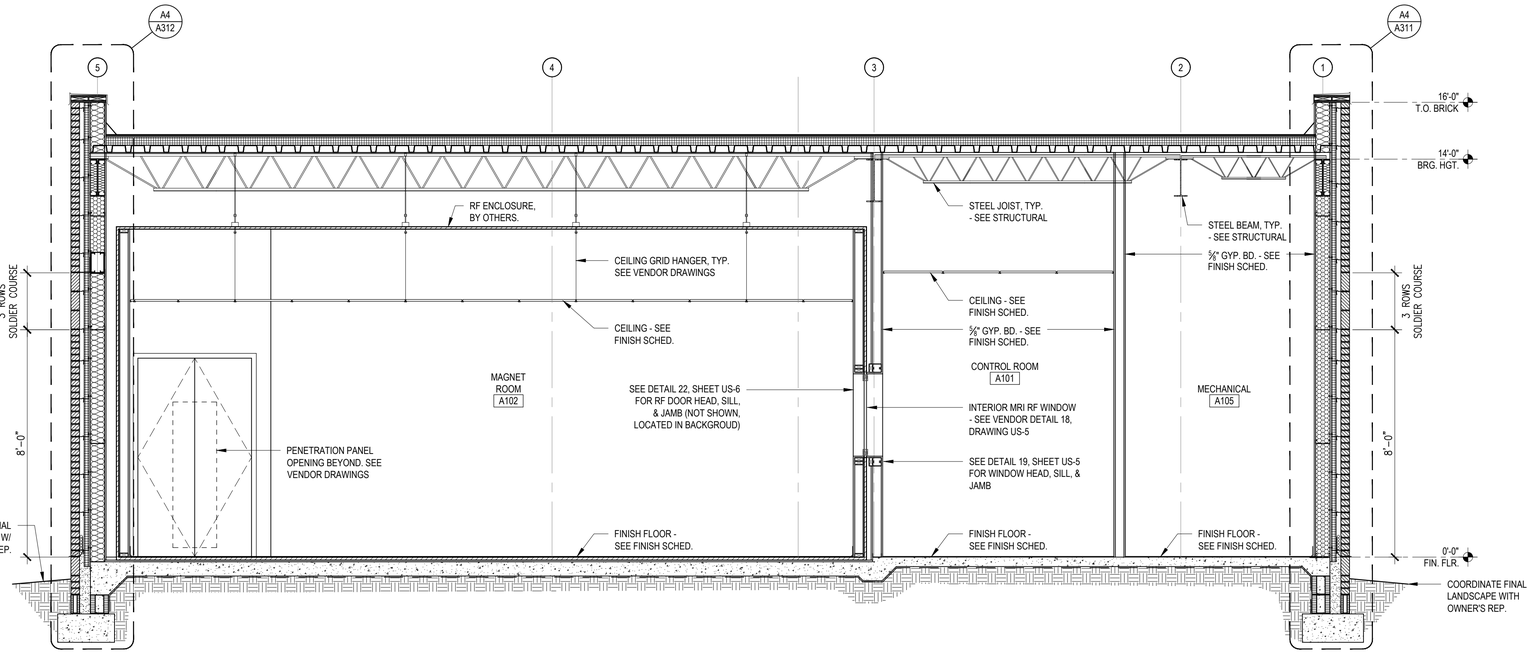
No.	Description	Date

EXTERIOR ELEVATIONS

PROJECT NUMBER 24107
DATED 03/28/2025

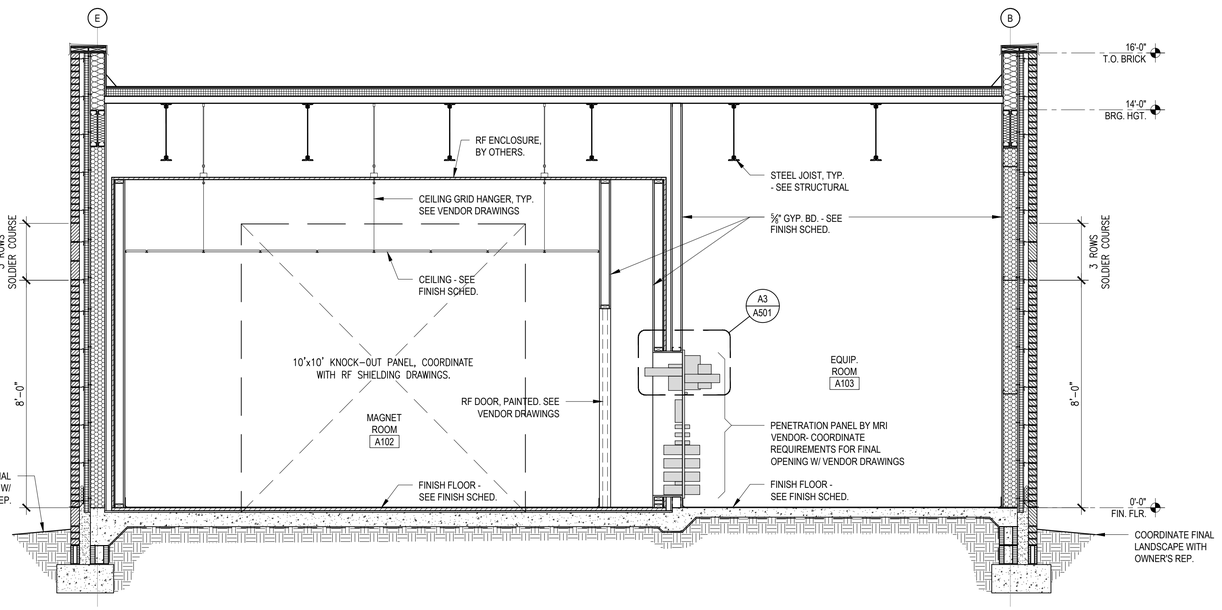
A-201

24107
BID DOCUMENTS
2025-04-04

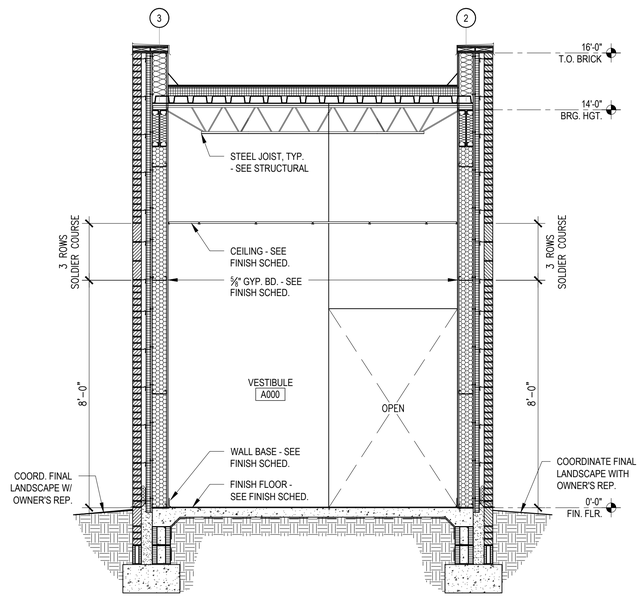


C1	BUILDING SECTION
SCALE: 3/8" = 1'-0"	

C4	.
SCALE:	



A1	BUILDING SECTION
SCALE: 3/8" = 1'-0"	



A3	BUILDING SECTION
SCALE: 3/8" = 1'-0"	

1 2 3 4 5

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REVISIONS:

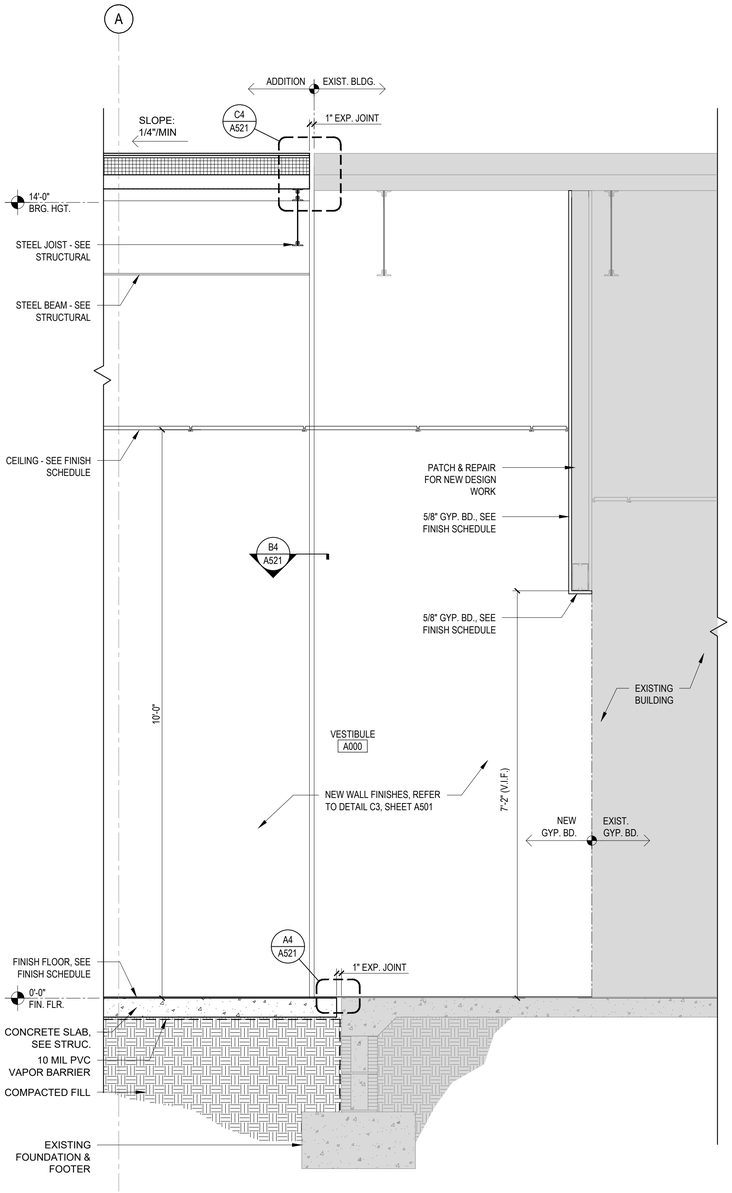
No.	Description	Date

BUILDING SECTIONS

PROJECT NUMBER 24107
DATED 03/28/2025

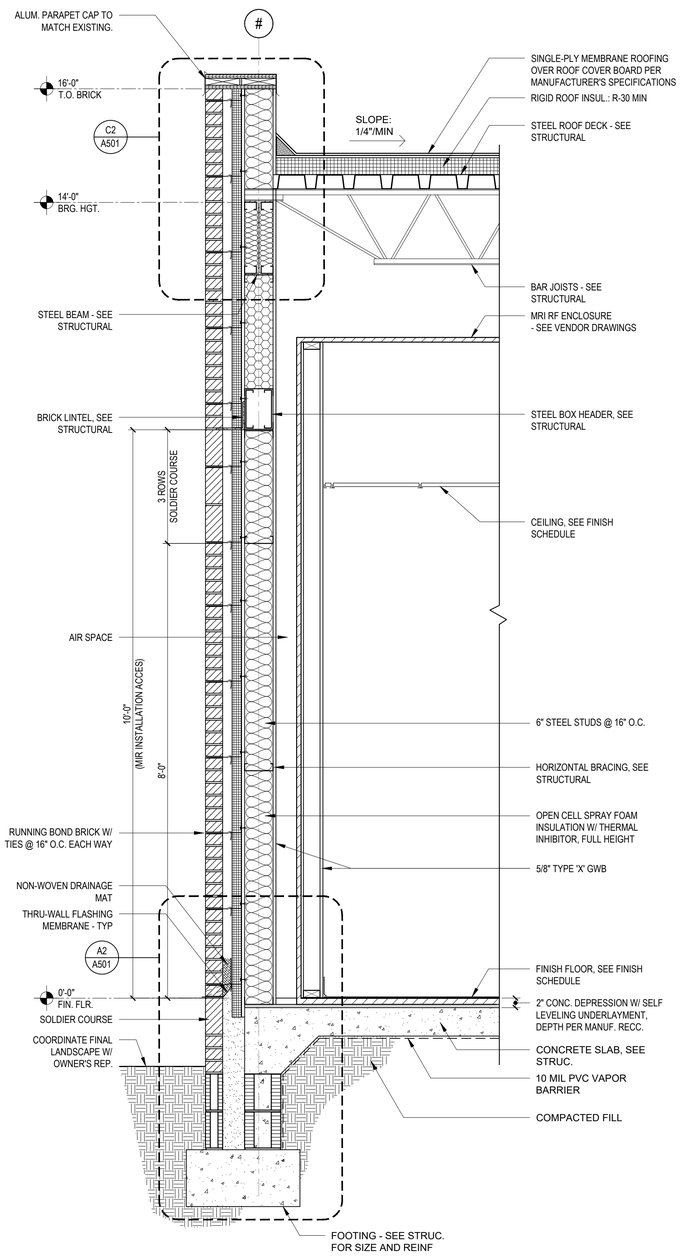
A-301

24107
BID DOCUMENTS
2025-04-04



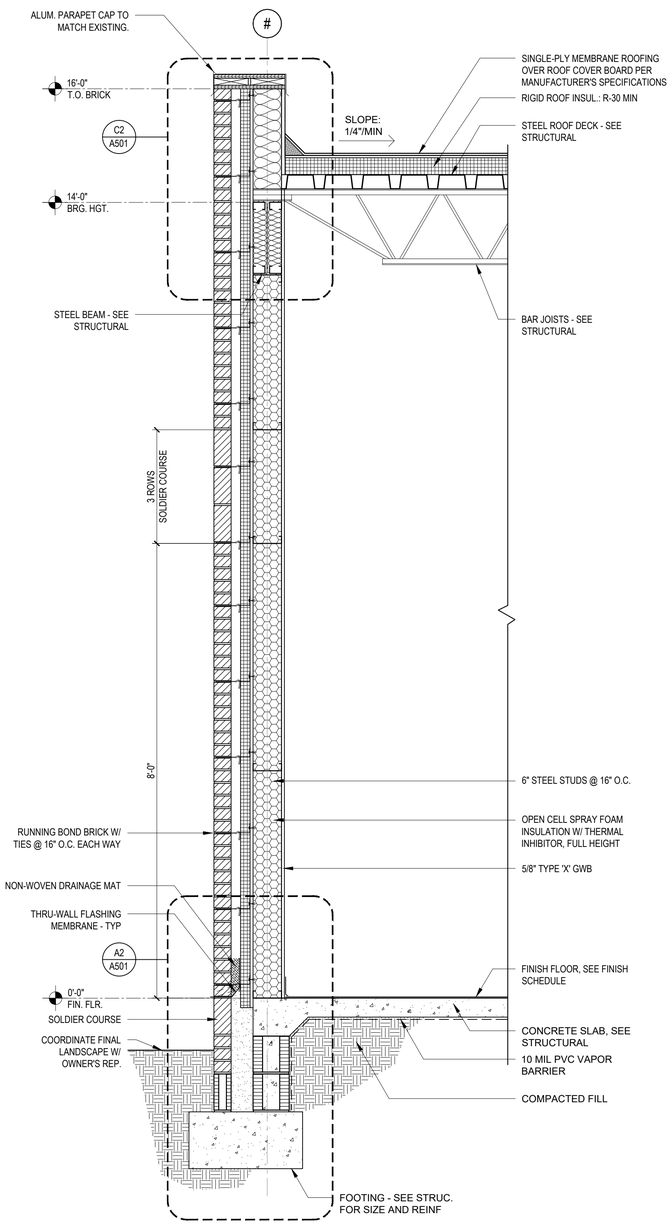
A1 WALL SECTION - TYP.

SCALE: 3/4" = 1'-0" @ NEW TO EXSTING CONNECTION



A2 WALL SECTION - TYP.

SCALE: 3/4" = 1'-0" @ MAGNET ROOM #A120 W/ DEPRESSED SLAB



ALL BRICK AND MORTAR TO MATCH EXISTING

A4 WALL SECTION - TYP

SCALE: 3/4" = 1'-0"

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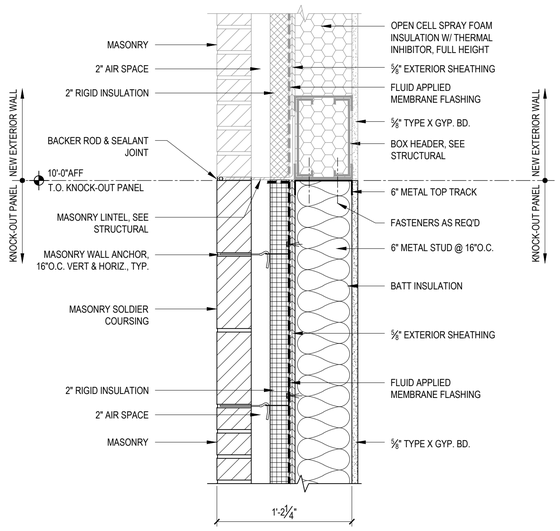
No.	Description	Date

WALL SECTIONS

PROJECT NUMBER	24107
DATED	03/28/2025

A-311

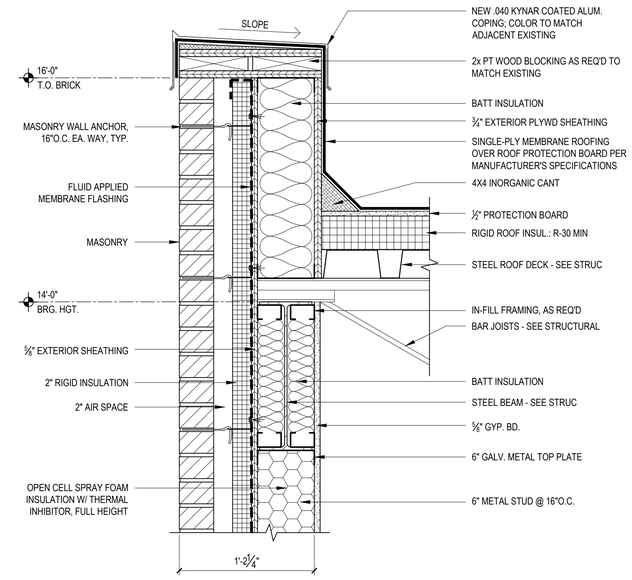
24107
BID DOCUMENTS
2025-04-04



ALL BRICK AND MORTAR TO MATCH EXISTING

C1 KNOCK-OUT PANEL ENLARGED DETAIL

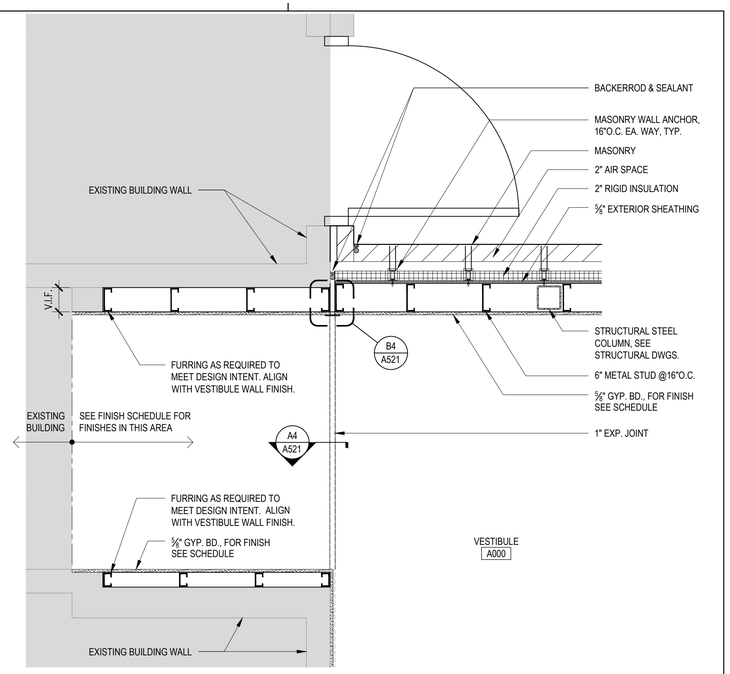
SCALE: 1-1/2"=1'-0" SECTION @ HEAD



ALL BRICK AND MORTAR TO MATCH EXISTING

C2 TYPICAL ROOF PARAPET

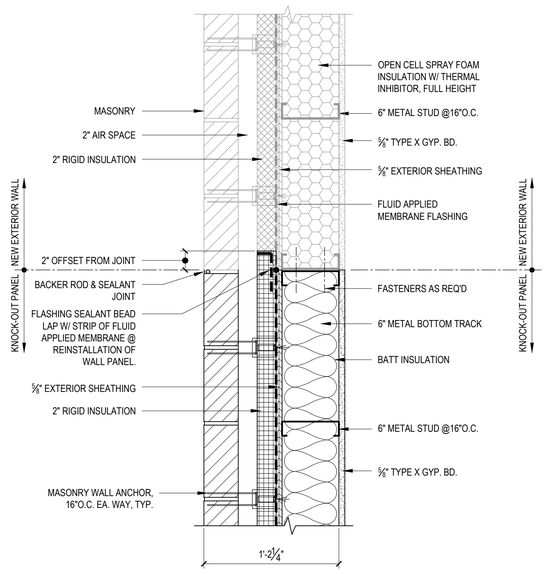
SCALE: 1-1/2"=1'-0"



ALL BRICK AND MORTAR TO MATCH EXISTING

C3 VESTIBLUE CONNECTION TO EXISTING BLDG.

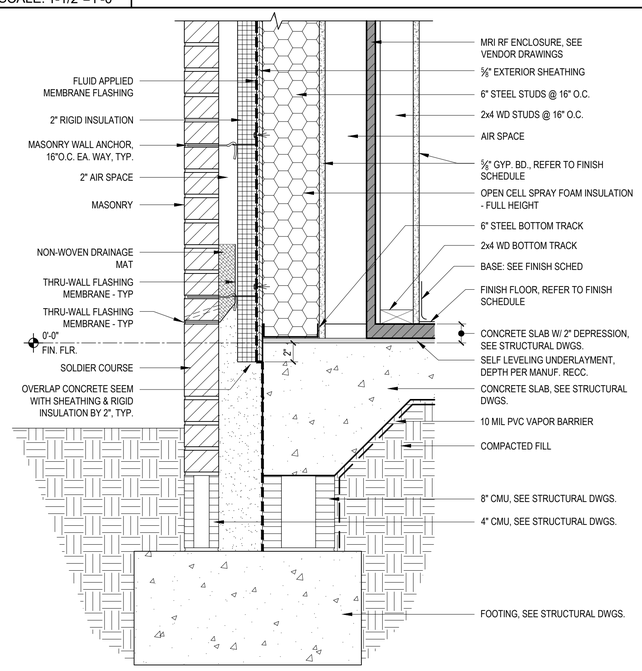
SCALE: 3/4"=1'-0" .



ALL BRICK AND MORTAR TO MATCH EXISTING

A1 KNOCK-OUT PANEL ENLARGED DETAIL

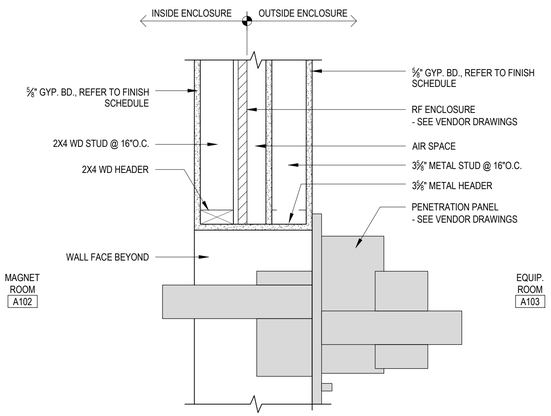
SCALE: 1-1/2"=1'-0" PLAN VIEW



ALL BRICK AND MORTAR TO MATCH EXISTING

A2 TYPICAL WALL FOOTING

SCALE: 1-1/2"=1'-0"



GENERAL NOTE:
USE ONLY NON-FERROUS FASTENERS ON WALL ASSEMBLY, DOOR FRAME, & TRIM FOR ALL CONSTRUCTION WITHIN MAGNET ROOM #120.

A3 PENETRATION PANEL OPENING

SCALE: 1-1/2"=1'-0"

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No.	Description	Date

DETAILS

PROJECT NUMBER 24107
DATED 03/28/2025

A-501

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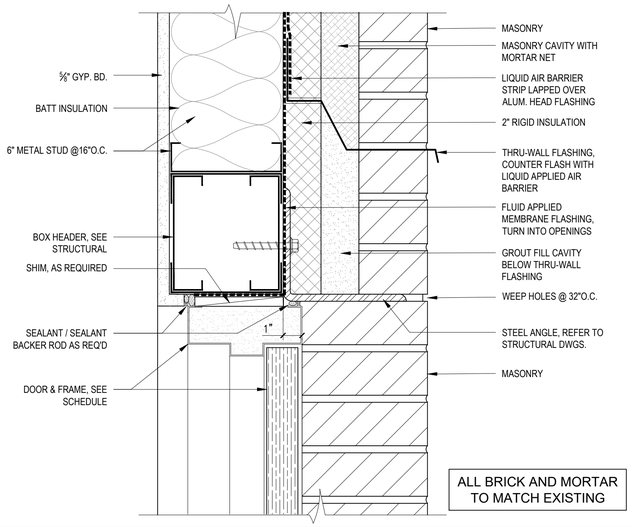
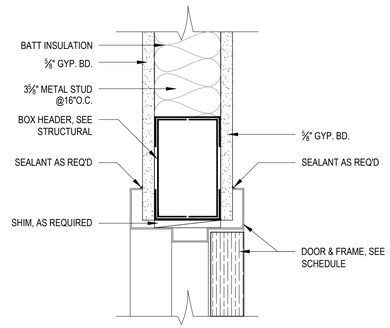
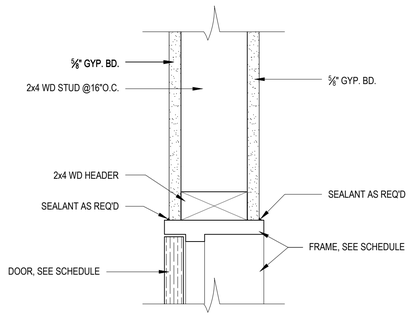
2025-04-04



C1	HEAD DETAIL
SCALE: 3" = 1'-0"	TYPICAL @ EXTERIOR OPENING

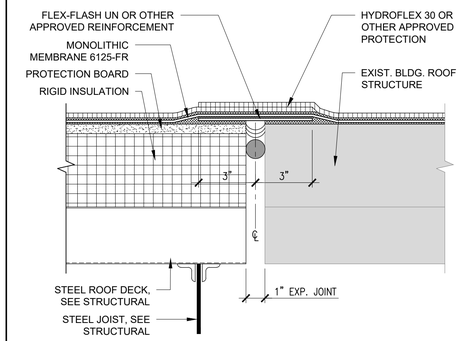


C2	HEAD DETAIL
SCALE: 3" = 1'-0"	TYPICAL @ INTERIOR OPENING



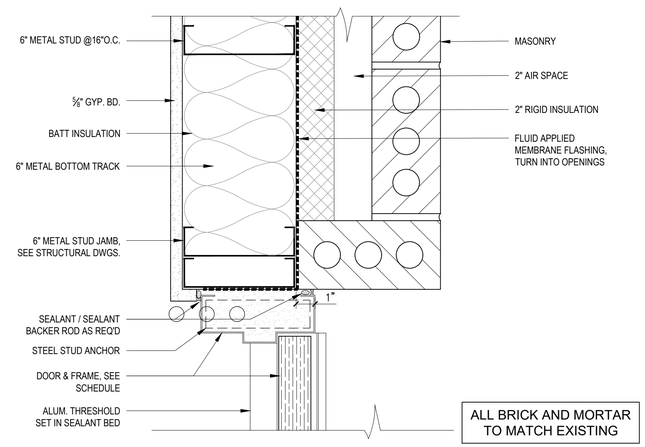
GENERAL NOTE:
USE ONLY NON-FERROUS FASTENERS ON WALL ASSEMBLY, DOOR FRAME, & TRIM FOR ALL CONSTRUCTION WITHIN MAGNET ROOM #120.

C3	HEAD DETAIL
SCALE: 3" = 1'-0"	DOOR #A102A ONLY

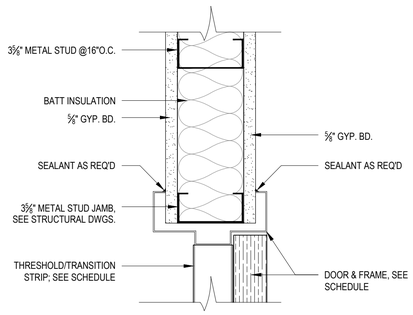


NOTES:
1. DETAIL DESIGNED FOR JOINTS WITH MAX. MOVEMENT ACCOMMODATION FACTOR OF 25%.
2. BACKER ROD AND SEALANT ARE REQUIRED IN JOINT PRIOR TO MM6125/FLEX-FLASH UN INSTALLATION.
3. IN COVERED/BURIED CONDITIONS, MM6125 IS EXTENDED AS CONTINUOUS FLASHING AS HIGH AS THE OVERBURDEN LEVEL. FLASHING MUST BE TERMINATED NO LESS THAN 4" ABOVE SUBSTRATE. IN ADDITION, ADEQUATE PROTECTION MUST BE PROVIDED FOR FLASHING FROM SUBSEQUENT TOPPING/ BACKFILL. (SEE W-6B) WHENEVER POSSIBLE THE EXPANSION JOINT SHOULD BE EXTENDED UP THROUGH ALL TOPPING LAYERS.

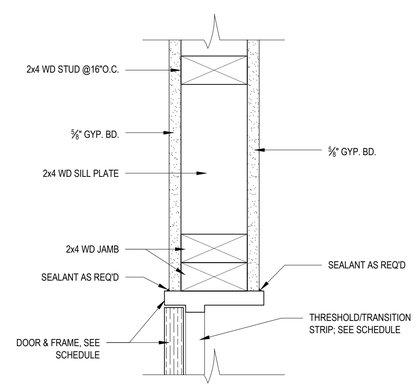
C4	EXPANSION JOINT DTL.
SCALE: 3" = 1'-0"	@ ROOF



B1	JAMB DETAIL
SCALE: 3" = 1'-0"	TYPICAL @ EXTERIOR OPENING

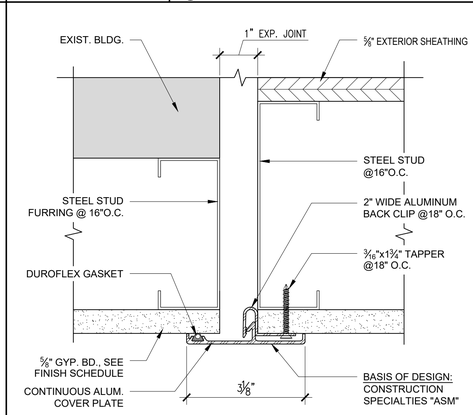


B2	JAMB DETAIL
SCALE: 3" = 1'-0"	TYPICAL @ INTERIOR OPENING

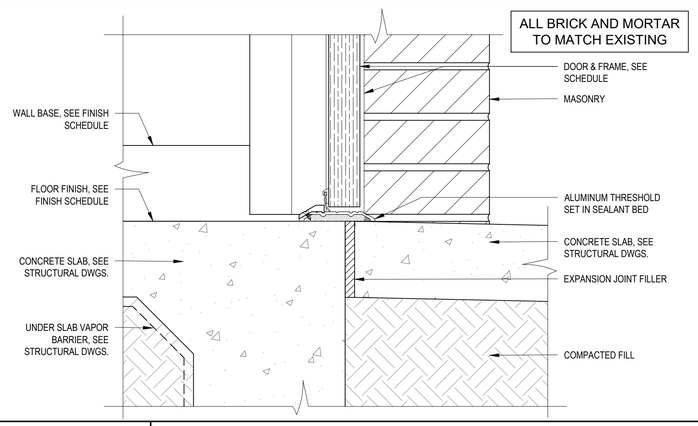


GENERAL NOTE:
USE ONLY NON-FERROUS FASTENERS ON WALL ASSEMBLY, DOOR FRAME, & TRIM FOR ALL CONSTRUCTION WITHIN MAGNET ROOM #120.

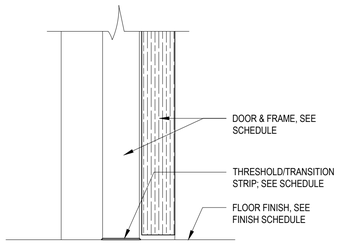
B3	JAMB DETAIL
SCALE: 3" = 1'-0"	DOOR #A102A ONLY



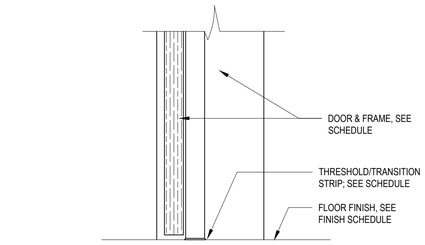
B4	EXPANSION JOINT DTL.
SCALE: 3" = 1'-0"	@ WALL



A1	THRESHOLD DETAIL
SCALE: 3" = 1'-0"	TYPICAL @ EXTERIOR OPENING

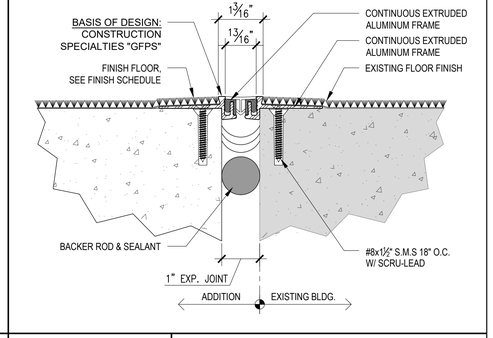


A2	THRESHOLD DETAIL
SCALE: 3" = 1'-0"	TYPICAL @ INTERIOR OPENING



GENERAL NOTE:
USE ONLY NON-FERROUS FASTENERS ON WALL ASSEMBLY, DOOR FRAME, & TRIM FOR ALL CONSTRUCTION WITHIN MAGNET ROOM #120.

A3	THRESHOLD DETAIL
SCALE: 3" = 1'-0"	DOOR #A102A ONLY



A4	EXPANSION JOINT DTL.
SCALE: 6" = 1'-0"	@ FLOOR

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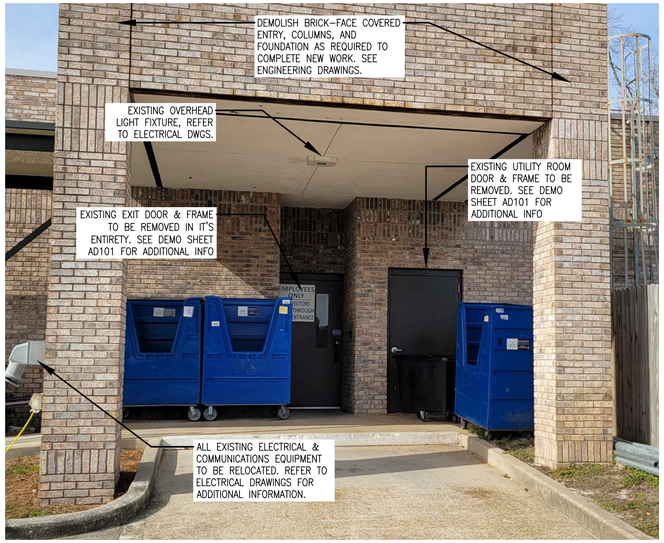
REVISIONS:

No.	Description	Date

HEAD, SILL, & JAMB DETAILS

PROJECT NUMBER	24107
DATED	03/28/2025

A-521



B1 EXISTING 4'-0" EXIT DOOR
SCALE: NTS .

B2 RAMP DN. FROM EXISTING 4'-0" DOOR
SCALE: NTS .

B4 RAMP & STOOP
SCALE: NTS .

A1 .
SCALE: NTS .

A2 .
SCALE: NTS .

A4 RAMP & STOOP
SCALE: NTS .

1 2 3 4 5

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REVISIONS:

No.	Description	Date
1	AHCA REVIEW COMMENTS	2/21/24

PHOTO DETAILS
RAMP & STOOP

PROJECT NUMBER 24107
DATED 03/28/2025

A-531

24107
BID DOCUMENTS
2025-04-04

B1 COLUMN PHOTO DETAIL - WEST SIDE

SCALE: NTS .

B2 COLUMN PHOTO DETAIL - WEST SIDE

SCALE: NTS .

B3 COLUMN PHOTO DETAIL - WEST SIDE

SCALE: NTS .

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Gulf Coast Hospital

REVISIONS:

No.	Description	Date
1	AHCA REVIEW COMMENTS	2/21/24

PHOTO DETAILS
COLUMN, WEST SIDE

PROJECT NUMBER	24107
DATED	03/28/2025

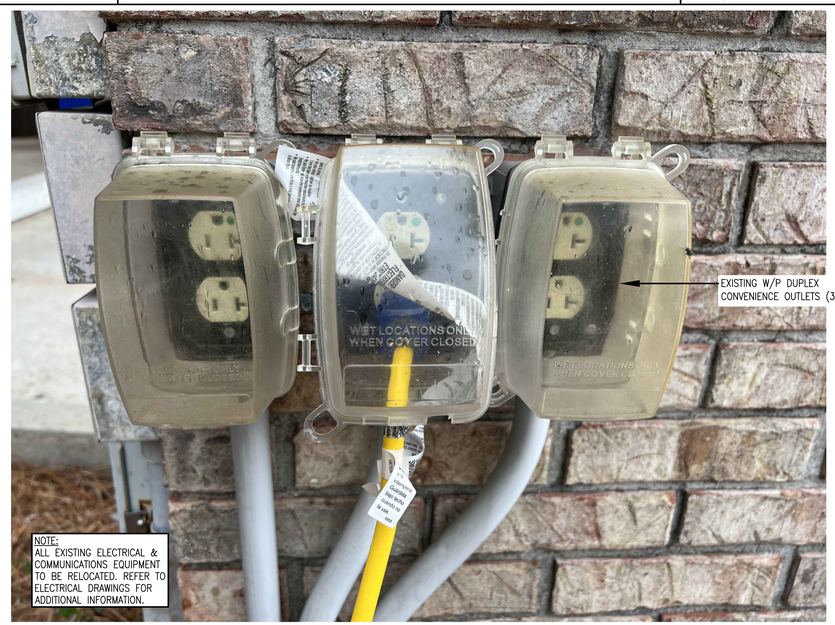
A-532

24107
BID DOCUMENTS
2025-04-04

B1 COLUMN PHOTO DETAIL - SOUTH SIDE
SCALE: NTS .

B2 COLUMN PHOTO DETAIL - SOUTH SIDE
SCALE: NTS .

B3 COLUMN PHOTO DETAIL - SOUTH SIDE
SCALE: NTS .



A1 COLUMN PHOTO DETAIL - SOUTH SIDE
SCALE: NTS .

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REVISIONS:

No.	Description	Date

PHOTO DETAILS
COLUMN, SOUTH SIDE

PROJECT NUMBER	24107
DATED	03/28/2025

A-533

24107
BID DOCUMENTS
2025-04-04

DOOR SCHEDULE

ROOM #	DOOR DATA			FRAME		DETAILS			
	PANEL TYPE	PANEL MATERIAL	DOOR SIZE	FRAME TYPE	FRAME MATERIAL	HEAD	JAMB	SILL	REMARKS
A000	F	HM	4'-0" X 7'-0"	HM	GHM	C1 / A521	B1 / A521	A1 / A521	
A100	F	SCWD	4'-0" X 7'-0"	HM	GHM	C2 / A521	B2 / A521	A2 / A521	
A101	F	SCWD	4'-0" X 7'-0"	HM	GHM	C2 / A521	B2 / A521	A2 / A521	
A102	SEE VENDOR DRAWINGS		4'-0" X 7'-0"	SEE VENDOR DRAWINGS					VENDOR PROVIDED
A102A	LV	WD	PR 2'-0" X 7'-0"	WD	WD	C3 / A521	B3 / A521	A3 / A521	
A103	F	SCWD	3'-6" X 7'-0"	ALUM	ALUM	C2 / A521	B2 / A521	A2 / A521	
A104	F	SCWD	3'-0" X 7'-0"	ALUM	ALUM	C2 / A521	B2 / A521	A2 / A521	
A104A	F	SCWD	3'-0" X 7'-0"	ALUM	ALUM	C2 / A521	B2 / A521	A2 / A521	
A105	F	HM	6'-0" X 7'-0"	HM	GHM	C1 / A521	B1 / A521	A1 / A521	
189	F	HM	3'-0" X 7'-0"	HM	GHM	EXISTING	EXISTING	EXISTING	

DOOR REMARKS:

1. THE ENTIRE DOOR ASSEMBLY SHALL BE BY THE RF SHEILDING CONTRACTOR

GENERAL NOTES (APPLIES TO ALL)

A. EXTERIOR DOORS TO BE LARGE MISSILE IMPACT-RATED.

B. EXTERIOR DOORS AND FRAMES TO MEET THE WIND LOAD REQUIREMENTS OF THE PROJECT.

C. BASIS OF DESIGN FOR ALUMINUM STOREFRONT:
EXTERIOR: CORAL ARCHITECTURAL PRODUCTS FL550 w/MS381 IMPACT-RATED ENTRANCE DOORS

THRESHOLD NOTES:

A. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.

B. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERTICAL LEVEL CHANGE.

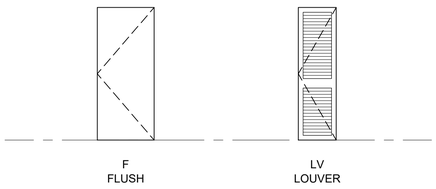
C. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.

DOOR SCHEDULE GENERAL NOTES

1. DOOR MATERIAL ABBREVIATIONS
   - ALUM ALUMINUM
   - HM HOLLOW METAL
   - GHM GALVANIZED HOLLOW METAL
   - PR PAIR
   - RFS RADIO FREQUENCY SHEILDING CONTRACTOR
   - SCWD SOLID CORE WOOD DOOR
2. GLASS TYPE ABBREVIATIONS
   - TG TEMPERED GLASS
   - SG SINGLE GLASS
   - IG INSULATING GLASS (2 LAYERS GLASS W/ ½" AIR SPACE)
   - XG IMPACT RESISTANT GLASS
   - TMG TRANSPARENT MIRROR GLASS
   - PCG POLYCARBONATE SHEET
3. UNLESS NOTED OTHERWISE ALL DOORS ARE 1-3/4" THICK.
4. DOOR FINISH ABBREVIATIONS
   - STN STAINED
   - PTD PAINTED
   - ANOD ANODIZED
5. COORDINATE WITH OWNER'S REPRESENTATIVE FOR HARDWARE LOCKSET TYPES.
6. EXTERIOR AND WET AREA HOLLOW METAL FRAMES AND DOORS TO BE GALVANIZED.
7. ALL DOORS OFF OF CORRIDORS TO HAVE A CLOSER.

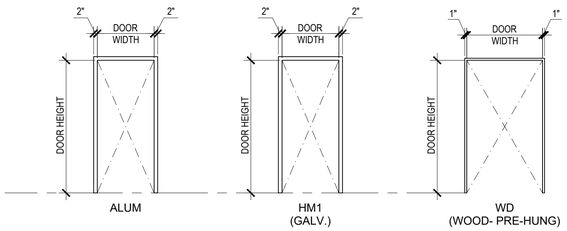
C4 DOOR SCHEDULE & NOTES

SCALE: N.T.S.



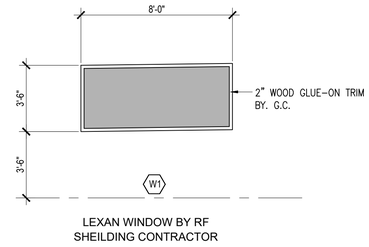
B4 DOOR TYPES

SCALE: 1/4" = 1'-0"



A4 DOOR FRAME TYPES

SCALE: 1/4" = 1'-0"



A5 WINDOW TYPES

SCALE: 1/4" = 1'-0"

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REVISIONS:

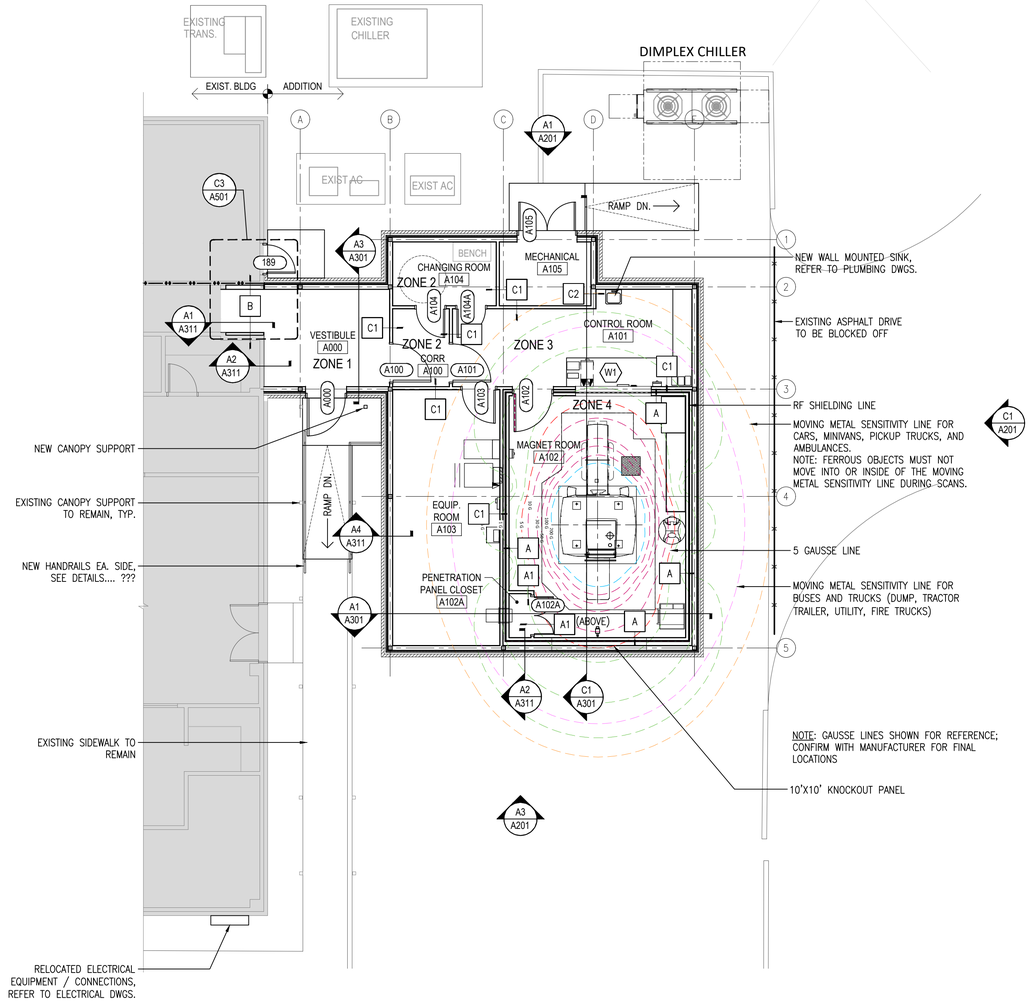
No.	Description	Date

DOOR SCHEDULE, DOOR & WINDOW TYPES

PROJECT NUMBER 24107
DATED 03/28/2025

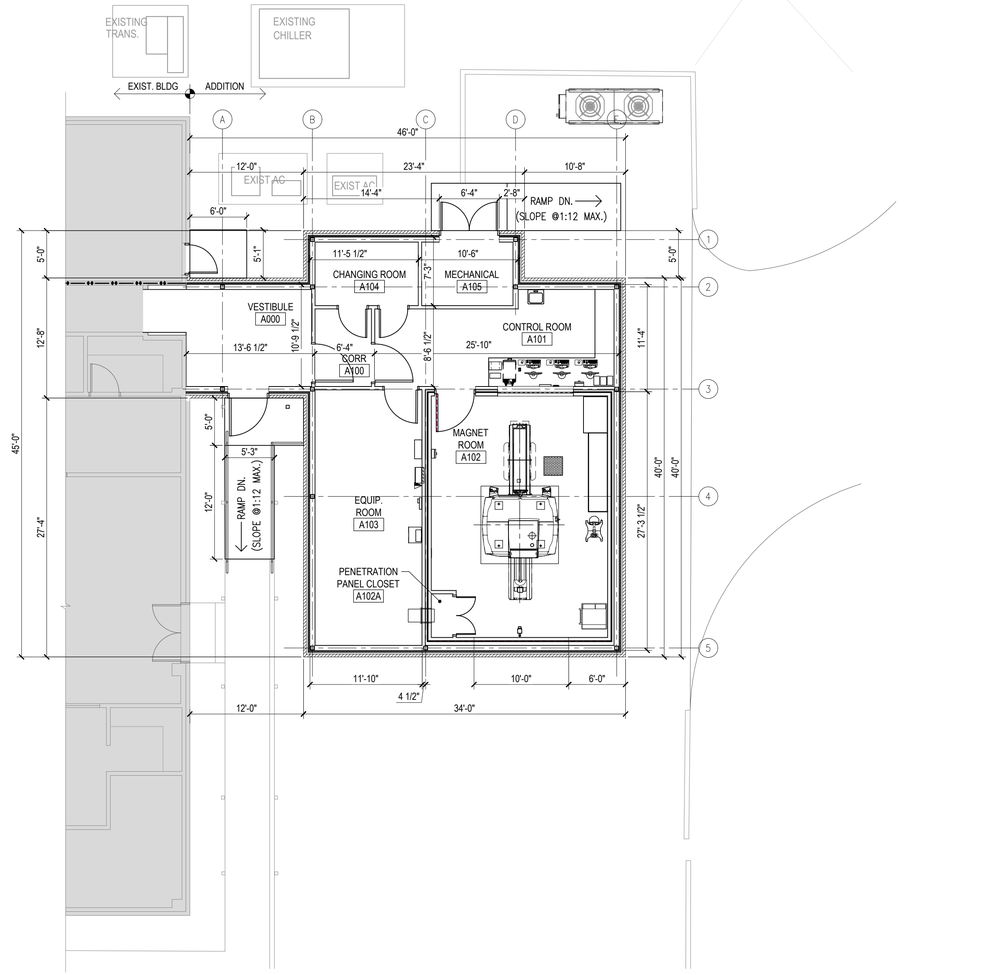
A-601

24107
BID DOCUMENTS
2025-04-04



NORTH

A1 ANNOTATION PLAN
SCALE: 1/8" = 1'-0"



NORTH

A3 DIMENSION PLAN
SCALE: 1/8" = 1'-0"

NORTH

A5 KEY PLAN
SCALE: NTS

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REVISIONS:

No.	Description	Date

NEW WORK PLAN

PROJECT NUMBER	24107
DATED	03/28/2025

A-101

22017
CONSTRUCTION DWGS
2025-04-04

GENERAL NOTES

1. IT IS NOTED THAT SOME AREAS WILL BE REQUIRED TO BE PROTECTED AS ORDINARY HAZARD (MECHANICAL ROOMS, ETC.) THESE AREAS HAVE BEEN IDENTIFIED BY A DIFFERENT HATCHING PATTERN THEN THE LIGHT HAZARD AREAS ON THE PLANS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN CURRENT WATER FLOW DATA AND DESIGN SPRINKLER SYSTEMS ACCORDINGLY. SHALL OBTAIN CURRENT WATER FLOW DATA AND DESIGN MODIFICATIONS ACCORDINGLY.
3. MAINTAIN THE INTEGRITY OF ALL FIRE RATED ASSEMBLIES AND ACOUSTICAL ASSEMBLIES.
4. CONTRACTOR SHALL COORDINATE SYSTEM DESIGN WITH ALL OTHER TRADES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INSPECTOR'S TEST LOCATIONS IN ACCORDANCE WITH NFPA 13 AND THE AUTHORITY HAVING JURISDICTION.
6. ALL PIPING SHALL OBSERVE PROPER PITCH. PROVIDE DRAINS FOR LOW POINTS.
7. THE SPRINKLER SYSTEM SHALL BE ARRANGED FOR FLUSHING. READILY REMOVABLE FITTINGS SHALL BE PROVIDED AT THE END OF ALL CROSSMAINS.
8. PIPE HANGERS SHALL BE INSTALLED AS REQUIRED BY NFPA 13 FOR SUPPORTING SPRINKLER PIPING. NO OTHER PIPING OR DEVICES SHALL BE ATTACHED TO THE SPRINKLER HANGER SYSTEM UNLESS THE HANGER HAS BEEN DESIGNED TO CARRY THE ADDITIONAL LOAD. PIPE HANGERS SHALL BE NON-FERROUS MATERIAL.
9. THIS CONTRACT DOES NOT INCLUDE ANY MATERIAL OR DEVICE TO IMPROVE THE STRUCTURAL STRENGTH OF THE BUILDING TO ENABLE IT TO CARRY THE LOAD OF THE FIRE PROTECTION SYSTEM.
10. ALL ABOVE GROUND WET SPRINKLER PIPE THAT IS THREADED SHALL BE TYPE K, L, OR M COPPER TUBE AND FITTINGS WITH JOINTS PER NFPA 13. CPVC PIPING IS NOT ACCEPTABLE.
11. INSTALL SPRINKLER HEADS CENTER OF TILE IN ACOUSTICAL CEILINGS. HEAD LOCATIONS SHALL BE GUIDED BY ARCHITECTURAL ELEMENTS FOR OTHER CEILING TYPES.
12. DO NOT LOCATE INSPECTORS TEST LOCATIONS OR DRAINS IN FINISHED SPACES. INDICATE ALL LOCATIONS OF EXPOSED PIPING ON SHOP DRAWINGS.
13. FLEXIBLE CONNECTIONS TO SPRINKLER HEADS ARE NOT ALLOWED.
14. SEE ARCHITECTURAL DRAWINGS FOR TYPICAL MOUNTING HEIGHT LOCATIONS.
15. ALL WORK SHALL COMPLY WITH EIGHTH EDITION (2023) FLORIDA BUILDING CODE, 2023 FLORIDA FIRE PREVENTION CODE, AND 2022 FGI GUIDELINES FOR DESIGN AND CONSTRUCTION OF HOSPITALS.
16. ALL SPRINKLER HEADS SHALL BE QUICK RESPONSE.
17. REFER TO GE HEALTHCARE AND UNIVERSAL SHIELDING CORP. DRAWINGS FOR ADDITIONAL REQUIREMENTS.
18. SPRINKLER PIPE MUST BE WITHIN 56" OF GROUND STUD. REFER TO UNIVERSAL SHIELDING DRAWINGS, PAGE 3 AND 4.
19. COORDINATE PIPE PENETRATION TO THE RF SHIELDING ENCLOSURE IN ZONE 4 MAGNET ROOM A102 WITH RF SHIELDING VENDOR'S DRAWINGS..

DESIGN CRITERIA

THE EXISTING FACILITY SHALL BE PROTECTED BY A WET PIPE SPRINKLER SYSTEM. THE WET PIPE SYSTEM SHALL BE HYDRAULICALLY DESIGNED WITH AN OUTSIDE HOSE STREAM ALLOWANCE AS NOTED ON EACH SYSTEM ENGINEERING SUMMARY AND DENSITY VALUES AS FOLLOWS:

LIGHT HAZARD = 0.10 GPM/SF WITH A MAXIMUM OF 225 SF COVERAGE PER SPRINKLER

ORDINARY HAZARD GROUP 1 = 0.15 GPM/SF WITH A MAXIMUM OF 130 SF COVERAGE PER SPRINKLER

ORDINARY HAZARD GROUP 2 = 0.20 GPM/SF WITH A MAXIMUM OF 130 SF COVERAGE PER SPRINKLER

THE SPRINKLER DESIGN SHALL BE BASED ON THE MOST HYDRAULICALLY DEMANDING 1500 SF. THE CONTRACTOR IS ALLOWED TO REDUCE THE DESIGN AREA BASED ON THE USE OF QUICK RESPONSE SPRINKLERS AND CEILING HEIGHT IN ACCORDANCE WITH NFPA 13.

THE DESIGN OF THE SPRINKLER SYSTEM SHALL BE BASED UPON WATER SUPPLY INFORMATION OBTAINED BY THE SPRINKLER CONTRACTOR AND WITNESSED BY THE AUTHORITY HAVING JURISDICTION.

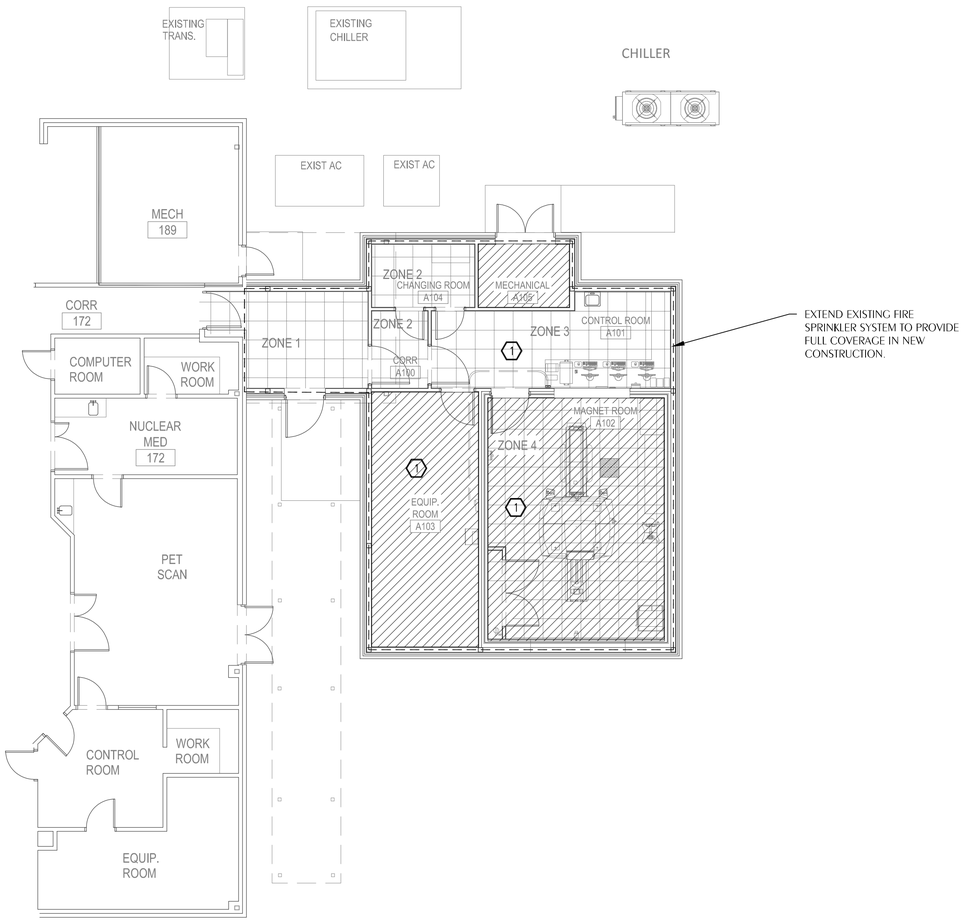
WATER BASED SPRINKLER SYSTEM REQUIREMENTS

1. THE POINT OF SERVICE AND BACKFLOW PREVENTER ARE EXISTING.
2. THE BUILDING SHALL BE FULLY SPRINKLED IN ACCORDANCE WITH THE MOST RECENT EDITION OF NFPA 13 AND LOCAL CODES.
3. REFER TO PLAN SHEETS AND HAZARD CLASSIFICATION LEGEND FOR HAZARD CLASSIFICATION OF EACH ROOM OR AREA.
4. THE NEW SYSTEMS SHALL SHALL BE HYDRAULICALLY CALCULATED IN ACCORDANCE WITH NFPA 13.

   LIGHT HAZARD: 0.10 GPM/SF, MAX 225 SF PER HEAD, 15 FT MAX NOMINAL SPACING; ORDINARY TEMPERATURE RATING HEADS.
   ORDINARY HAZARD GROUP 1: 0.15 GPM/SF, MAX 130 SF PER HEAD, 15 FT MAX NOMINAL SPACING; INTERMEDIATE TEMPERATURE RATING HEADS.
   ORDINARY HAZARD GROUP 2: 0.20 GPM/SF, MAX 130 SF PER HEAD, 15 FT MAX NOMINAL SPACING; INTERMEDIATE TEMPERATURE RATING HEADS.

   FOR ADDITIONAL REQUIREMENTS, REFER TO DESIGN CRITERIA NOTES ON THIS SHEET.

5. THE POINT OF SERVICE CONNECTION IS EXISTING.
6. REFER TO DESIGN CRITERIA NOTES ON THIS SHEET FOR FLOW TEST DATA.
7. WET PIPE RISER IS EXISTING AND WILL NOT BE CHANGED.
8. MICROBIAL INDUCED CORROSION IS NOT ANTICIPATED IN THIS PROJECT.
9. BACKFLOW PREVENTER IS EXISTING.
10. REFER TO GENERAL NOTES FOR QUALITY AND PERFORMANCE SPECIFICATIONS OF ALL FIRE PROTECTION COMPONENTS.
11. NO FIRE PUMP IS REQUIRED.
12. NO ON SITE FIREWATER STORAGE TANK IS REQUIRED.



N 1 FP-101 FIRE PROTECTION FLOOR PLAN
SCALE: 1/8" = 1'-0"

LEGEND

— — — WM — — —	FW	FIRE WATER SUPPLY
———	DP	DRY PIPE SPRINKLER SUPPLY
— — — — —	FM	EXISTING UNDER GROUND FIRE SPRINKLER MAIN
———	WP	WET PIPE SPRINKLER SUPPLY
———	FW(E)	EXISTING FIRE WATER SUPPLY
	(E)	EXISTING
		EXISTING FIRE RISER
		NEW FIRE SPRINKLER

SHEET NOTES

1. PROVIDE NON-MAGNETIC CONCEALED PENDENT SPRINKLERS, TYCO RFII-MRI OR EQUAL AS REQUIRED FOR COVERAGE OF ROOMS WITHIN THE METAL SENSITIVITY LINES. COORDINATE WITH GE DRAWINGS.

HAZARD CLASSIFICATION

	LIGHT HAZARD
	ORDINARY HAZARD GROUP 1
	ORDINARY HAZARD GROUP 2

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BID DOCUMENTS

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DIAGNOSTICS MRI ADDITION
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HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

FIRE PROTECTION FLOOR PLAN

PROJECT NUMBER	24107
DATED	03/28/2025

FP-101

22017
CONSTRUCTION DWGS
2025-04-04

LEGEND

———	S OR W	SOIL OR WASTE PIPING
- - - - -	V	VENT PIPING
———	CW	COLD WATER SUPPLY PIPING
—·—·—	HW	HOT WATER SUPPLY PIPING
—— - - ——	HWR	HOT WATER RETURN PIPING
GAS GAS	G	GAS PIPING
	GV	GATE VALVE
	CV	CHECK VALVE
	BV	BALL VALVE
	HB	HOSE BIBB
	WH	WALL HYDRANT
	CO	CLEANOUT TO FLOOR
	FD	FLOOR DRAIN
	COTS	CLEANOUT TO GRADE
		UNION
	VTR	VENT THRU ROOF
1		SHEET NOTE
		POINT OF CONNECTION TO EXISTING
S		SOLENOID VALVE
	EOD	EMERGENCY OVERFLOW DRAIN
	RD	ROOF DRAIN
	TP	TRAP PRIMER
	EWH	ELECTRIC WATER HEATER
	WHA	WATER HAMMER ARRESTOR TYPE A
	WHB	WATER HAMMER ARRESTOR TYPE B
	WHC	WATER HAMMER ARRESTOR TYPE C
	L	LAVATORY
	SK	SINK
	HS	HAND SINK
	TVC	TEMPERATURE CONTROL VALVE
	MS	MASTER SHUT OFF VALVE
	S	SWITCH
	WV	WET VENT
	CP	CIRCULATOR PUMP
	HD	2" HUB DRAIN WITH FLEXIBLE TRAP SEAL BY MIFAB OR EQUAL ABOVE CEILING UNLESS NOTED
	MV	MIXING VALVE
	EWC	ELECTRIC WATER COOLER
	UB	UTILITY BOX
	COAC	CLEAN OUT ABOVE CEILING
	KW	KILOWATT
	1	EQUIPMENT TAG FOR EQUIPMENT PROVIDED BY OTHERS

GENERAL NOTES

1. COORDINATE ALL PIPING WITH DUCTWORK SHOP DRAWINGS AND EXISTING CONDITIONS. ROUTE PIPING AS REQUIRED TO AVOID CONFLICTS.
2. PRIOR TO START OF ANY WORK, COORDINATE SANITARY SEWER AND POTABLE WATER PIPING WITH CIVIL DRAWINGS.
3. FIELD VERIFY PIPE INVERTS PRIOR TO LAYING OUT SANITARY SEWER PIPING.
4. ALL PIPING PASSING THROUGH ANY WALL SHALL HAVE A SLEEVE PER SPECIFICATIONS.
5. ALL PIPING PASSING THROUGH FIRE-RATED WALLS SHALL HAVE A FIRE-RATED SLEEVE PER SPECIFICATIONS. ALL PIPING PENETRATIONS THROUGH WALLS OR FLOORS SHALL BE SEALED TO EQUAL THE RATING OF THE WALLS OR FLOORS.
6. ALL PIPING INDICATED IS ABOVE THE CEILING EXCEPT THE OBVIOUS SANITARY SOIL, WASTE, VENT AND POTABLE WATER PIPING BELOW FLOOR OR GRADE.
7. SEE TOILET ROOM ELEVATIONS ON ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE MOUNTING HEIGHT.
8. UNDER SLAB SOIL, WASTE AND VENT PIPING PASSING TO UNDERSIDE OR THROUGH FOUNDATION FOOTING, WALL OR GRADE BEAM SHALL BE PROVIDED WITH A RELIEVING ARCH OR PIPE SLEEVE 2 (TWO) PIPE SIZES GREATER THAN PIPE SIZE INDICATED ON PLANS. COORDINATE FINAL PIPE ROUTING AND LAYOUT WITH STRUCTURAL DRAWINGS.
9. PRIOR TO SUBSTANTIAL COMPLETION OF NEW AND ALTERED WORK AREAS, CONTRACTOR SHALL HAVE SANITARY PLUMBING SYSTEM CLEARED OF DEBRIS OR ANY MATTER THAT WOULD INTERFERE OR PREVENT ADEQUATE CONVEYANCE OF MATERIALS FROM MOVING THROUGH AND TERMINATING INTO BUILDING OR PUBLIC DISPOSAL FACILITIES.
10. ALL (VTR'S) VENT THRU ROOF PENETRATIONS INDICATED ON PLANS ARE PRELIMINARY. FINAL LOCATIONS SHALL BE COORDINATED WITH ALL TRADES. ALL VTR'S SHALL BE A MINIMUM OF 10'-0" FROM ALL FRESH AIR INTAKE OPENINGS.
11. ALL TRAP PRIMERS AND DOMESTIC WATER ISOLATION VALVES SHALL BE ACCESSIBLE. TRAP PRIMERS LOCATED IN THE VICINITY OF WATER CLOSETS SHALL BE ACTIVATED BY WATER CLOSET USAGE. ISOLATION VALVES SHALL BE OF THE QUARTER TURN BALL OR GATE TYPE.
12. CONTRACTOR SHALL DEVELOP AND SUBMIT COORDINATION SHOP DRAWINGS WHICH IDENTIFY ROUTING OF PLUMBING PIPE AND LOCATION OF EQUIPMENT. SHOP DRAWINGS SHALL INDICATE COORDINATION WITH THE WORK OF OTHER TRADES.
13. ALL WORK SHALL COMPLY WITH THE FLORIDA BUILDING CODE 8TH EDITION (2023) PLUMBING.
14. REFER TO GE HEALTHCARE AND UNIVERSAL SHIELDING CORP. DRAWINGS FOR ADDITIONAL REQUIREMENTS.
15. PIPE PENETRATION OF ENCLOSURE SHALL BE PER USC DRAWING SHEET 4.

PLUMBING FIXTURE SCHEDULE

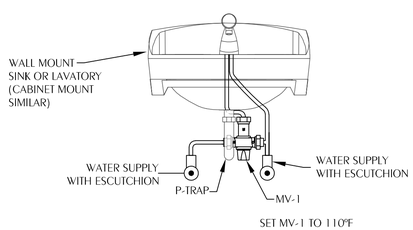
MARK	FIXTURE	PIPE SIZES-INCHES		
		CW	HW	W
HS-1	HAND SINK	3/8	3/8	1-1/2
EWH-1	ELECTRIC WATER HEATER	1/2	1/2	-
TP	TRAP PRIMER - PRESSURE ACTIVATED	-	-	-
MV-1	WATER MIXING VALVE	1/2	1/2	-
RD/EOD	ROOF DRAIN / EMERGENCY OVERFLOW DRAIN	-	SEE PLANS	-
HB	HOSE BIBB	3/4	-	-

1. WATER SUPPLY TAPPING TO EACH PLUMBING FIXTURE SHALL BE FULL SIZE (MINIMUM).
2. SEE ELECTRICAL DWGS FOR FINAL POWER REQUIREMENTS.
3. PROVIDE WATER HAMMER ARRESTERS ON HOT & COLD WATER SUPPLY BRANCHES SERVING SINGULAR, MULTIPLE OR GROUPS OF PLUMBING FIXTURES. ADHERENCE TO THE PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I.-WH201 (PER SPECIFICATIONS) SHALL BE EMPLOYED IN DETERMINING PROPER SIZE, SELECTION, PLACEMENT, LOCATION AND INSTALLATION OF ARRESTERS.

EQUIPMENT SCHEDULE

ITEM NO.	QUANTITY	DESCRIPTION	UTILITY REQUIREMENTS
1	1	CRYOCOOLER COMPRESSOR (BY OTHERS)	PROVIDE 1/2" DRAIN TUBING TO OPEN HUB DRAIN. INSTALL PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. PROVIDE 3/4" DOMESTIC WATER CONNECTION WITH BACKFLOW PREVENTER TO EMERGENCY COOLING SUPPLY.

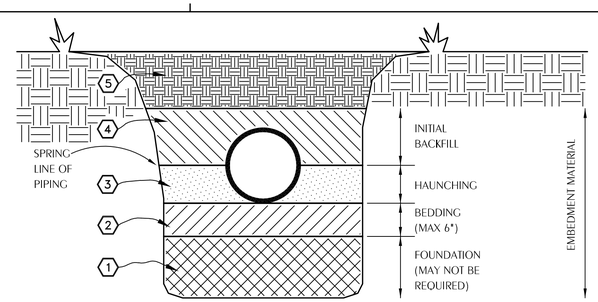
1. VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO ROUGH-IN.



4 LAV/SINK MIXING VALVE DETAIL
P-001
SCALE: NONE
NOTE: MIXING VALVE WILL BE TYPICAL FOR HS-1

1. A FOUNDATION MAY BE REQUIRED IN VERY POOR SOIL CONDITIONS.
2. BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE. IN DRY SOIL CONDITIONS, CLASS II OR III MATERIAL SHALL BE HAND PLACED IN 4-6", LIGHTLY COMPACTED UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. IN WET CONDITIONS, CLASS I, II OR III MATERIAL SHALL BE HAND PLACED IN 4-6", UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. WHEN UTILIZING CLASS I MATERIAL, SUFFICIENT AMOUNTS OF CLASS II OR III MATERIAL SHALL BE ADDED TO FILL ALL VOIDS CREATED BY THE USE OF CLASS I MATERIAL.
3. HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. CLASS II OR III MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
4. INITIAL BACKFILL MATERIAL SHALL BE CLASS II OR III. IT SHALL BE PLACED WITHIN 24-30" ABOVE THE TOP OF THE PIPE AND TAMPED BY A PORTABLE VIBRATOR. FINAL BACKFILL MATERIAL MAY BE MACHINE PLACED. THE MATERIAL SHALL BE CLASS II OR III MATERIAL. CLASS IV MATERIAL MAY BE INSTALLED OUTSIDE OF ROADWAY.
5. FINAL BACKFILL UNDER ROADWAYS MAY REQUIRE SPECIAL COMPACTION AND DENSITY TESTS. A MINIMUM OF 30" OF COVER OVER THE TOP OF THE PIPE SHALL BE PROVIDED BEFORE THE TRENCH IS WHEEL-LOADED.

NOTE:
ALL EMBEDMENT MATERIALS SHALL BE NO LESS THAN 95% OF MAXIMUM DENSITY. LABORATORY TESTING OF THE SOIL WILL BE REQUIRED. THIS PROCEDURE SHALL BE REQUIRED ON ALL INSTALLATIONS. ALL TRENCHING, EXCAVATION, AND BACKFILLING SHALL BE IN ACCORDANCE WITH 2023 FLORIDA PLUMBING CODE.



EMBEDMENT MATERIALS

CLASS I: ANGUALAR, 1/4"-1-1/2", GRADED STONE, INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE AND CRUSHED SHELLS.

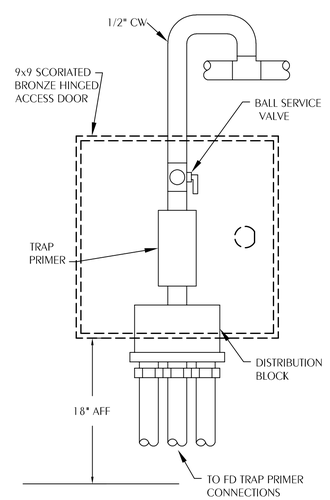
CLASS II: COARSE SANDS AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF 1-1/2" INCLUDING VARIOUS GRADED SANDS AND GRAVELS CONTAINING SMALL PERCENTAGES OF FINES, GENERALLY GRANULAR AND NON-COHESIVE, EITHER WET OR DRY. SOIL TYPES GW, GP, SW, AND SP ARE INCLUDED IN THIS CLASS.

CLASS III: FINE SAND AND CLAY GRAVELS, INCLUDING FINE SANDS, SAND-CLAY MIXTURES AND GRAVEL-CLAY MIXTURES. SOIL TYPES GM, GC, SM, AND SC ARE INCLUDED IN THIS CLASS.

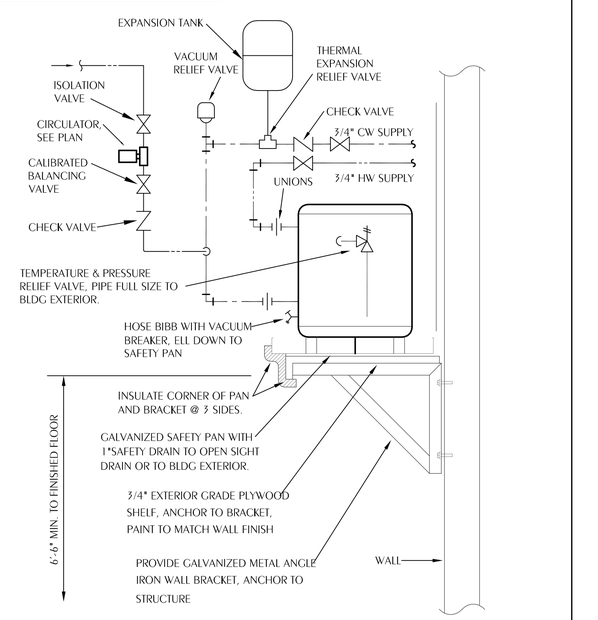
CLASS IV: SILT, SILTY CLAYS, AND CLAYS, INCLUDING INORGANIC CLAYS AND SILT OF MEDIUM TO HIGH PLASTICITY AND LIQUID LIMITS. SOIL TYPES MH, ML, CH, AND CL ARE INCLUDED IN THIS CLASS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.

CLASS V: THIS CLASS INCLUDES THE ORGANIC SOILS, AS WELL AS SOILS CONTAINING FROZEN EARTH, DEBRIS, ROCKS LARGER THAN 1-1/2" IN DIAMETER AND OTHER FOREIGN MATERIALS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.

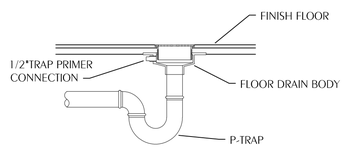
1 EXCAVATION AND BACKFILL DETAIL
P-001
SCALE: NONE



2 TRAP PRIMER DETAIL
P-001
SCALE: NONE



3 WALL MOUNT EWH
P-001
SCALE: NONE



5 FLOOR DRAIN WITH TRAP PRIMER DETAIL
P-001
SCALE: NONE

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BID DOCUMENTS

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DIAGNOSTICS MRI ADDITION
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HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

PLUMBING LEGEND, SCHEDULE, NOTES, AND DETAILS

PROJECT NUMBER	24107
DATED	03/28/2025

P-001

PLUMBING SPECIFICATIONS

1. GENERAL

A. THE CONTRACTOR SHALL FURNISH AL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND PERFORM ALL WORK AND SERVICES FOR ALL PLUMBING AS SHOWN ON DRAWINGS AND AS SPECIFIED, IN ACCORDANCE WITH PROVISIONS OF THE CONTRACT DOCUMENTS, AND COMPLETELY COORDINATED WITH WORK OF ALL OTHER TRADES.
B. ALTHOUGH SUCH WORK IS NOT SPECIFICALLY INDICATED, FURNISH AND INSTALL ALL SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES AND DEVICES INCIDENTAL TO OR NECESSARY FOR A SOUND, SECURE AND COMPLETE INSTALLATION.
C. ALL WORK SHALL COMPLY WITH THE 2023 FLORIDA BUILDING CODE.

2. SCOPE OF WORK

A. THE WORK INCLUDES THE FOLLOWING ITEMS BUT IS NOT NECESSARILY LIMITED TO THESE:
1. ALL POTABLE WATER, DRAIN, WASTE AND VENT PIPING FOR COMPLETE PLUMBING SYSTEM.
2. ALL WASTE AND DRAIN PIPING INCLUDING CONNECTING INTO EXISTING SERVICES.
3. ALL MATERIALS, EQUIPMENT, FIXTURES, ACCESSORIES AND TRIM, TO MAKE A COMPLETE FINISHED INSTALLATION.
4. NECESSARY TRENCHING AND BACKFILLING TO INSTALL THE PLUMBING SYSTEM.
5. ALL INSULATION AS SPECIFIED HEREIN.

3. SITE INSPECTION:

A. BEFORE SUBMITTING PROPOSALS, EACH BIDDER SHALL VISIT THE SITE AND FULLY FAMILIARIZE HIMSELF WITH ALL JOB CONDITIONS AND SHALL BE FULLY INFORMED AS TO THE EXTENT OF WORK.

4. QUALITY OF MATERIALS AND APPROVALS:

A. THE FIXTURES AND EQUIPMENT ARE SPECIFIED BY MANUFACTURER AND MODEL NUMBER FOR THE PURPOSE OF ESTABLISHING TYPE AND QUALITY REQUIRED. OTHER MANUFACTURER'S PRODUCTS OF EQUAL QUALITY AND TYPE, AS DETERMINED BY THE ARCHITECT, MAY BE USED WHEN APPROVED.

5. TESTS

A. CONCEALED WORK SHALL REMAIN UNCOVERED UNTIL REQUIRED TESTS HAVE BEEN COMPLETED. TESTS SHALL BE WITNESSED BY THE ENGINEER. PROVIDE 24 HOUR NOTICE PRIOR TO TEST. TESTS SHALL BE REPEATED AFTER DEFECTS HAVE BEEN ELIMINATED.
B. DRAIN SYSTEMS: A WATER TEST SHALL BE APPLIED TO ALL PARTS OF THE DRAINAGE SYSTEM BEFORE THE PIPES ARE CONCEALED OR FIXTURES SET IN PLACE. TEST SHALL BE WITH 10' HEAD AND SHALL BE FOR A DURATION OF 4 HOURS.
C. WATER SYSTEM: PIPING SHALL BE PRESSURE TESTED AT 100 PSIG FOR A DURATION OF 4 HOURS.
C. STERILIZATION: THE ENTIRE WATER DISTRIBUTION SYSTEM SHALL BE THOROUGHLY STERILIZED WITH SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION OF AVAILABLE CHLORINE. THE COMPLETE STERILIZATION OPERATION SHALL BE APPROVED BY THE STATE BOARD OF HEALTH REPRESENTATIVE.

6. PIPE AND FITTINGS

A. STORMWATER, WASTE, VENT AND DRAIN PIPING:
1. PIPING BELOW SLAB SHALL BE PVC-DWV PIPE AND FITTINGS. CELLULAR CORE PVC PIPE IS NOT PERMITTED.
2. PIPING ABOVE THE SLAB SHALL BE PVC-DWV PIPE AND FITTINGS. CELLULAR CORE PVC IS NOT PERMITTED.
B. WATER PIPING:
1. WATER PIPING SHALL BE COPPER TUBING, TYPE "K" (SOFT UP TO 1-INCH, OVER 1-INCH TO BE HARD) BELOW SLAB AND TYPE "L" ABOVE SLAB, WITH SWEAT FITTINGS.
2. WATER PIPING MORE THAN FIVE FEET OUTSIDE BUILDING SHALL BE TYPE "K" COPPER.

7. PLASTIC PIPE

A. CONTRACTOR MAY, AS INDICATED IN THESE SPECIFICATIONS, USE SCHEDULE 40 PVC.
B. MATERIALS: PVC PIPE SHALL BE SCHEDULE 40 PIPE AND FITTINGS PRODUCED FROM MATERIAL CONFORMING TO ASTM D 1784, TYPE I, GRADE I, 200 PSI DESIGN STRESS (PVC 1120).

8. INSULATION:

A. GENERAL: ALL INSULATION WORK SHALL BE DONE BY WORKMEN THOROUGHLY COMPETENT IN THIS TRADE.

B. THE FOLLOWING SHALL BE INSULATED AS INDICATED:
1. ALL COLD AND HOT WATER PIPING AND FITTINGS: 1.5" IN. THICK PREFORMED FIBERGLASS WITH FACTORY JACKET THAT MEETS ASTM C547 WITH CONDUCTIVITY OF 0.21-0.28 BTU IN. @ 100°F, FIRE RESISTANT.

9. INSTALLATION OF PIPING SYSTEMS:

A. GRADE: ALL BUILDING SEWERS SHALL HAVE A UNIFORM GRADE OF NOT LESS THAN 1/8 IN. TO THE FOOT, DOWNWARD IN DIRECTION OF FLOW FOR PIPE 3 IN. AND LARGER. PIPE SMALLER THAN 3 IN. SHALL HAVE GRADE OF 1/4 IN. TO THE FOOT.
B. CLEANOUTS: ALL CLEANOUT PLUGS SHALL BE RECESSED BRASS TYPE.
1. CLEANOUTS TO FINISHED FLOORS SHALL BE EQUAL TO JOSAM SERIES 56000-18-41 (-12, -14), BRONZE PLUG, CLAMP RING AND FLANGE, LEVELEZE ADJUSTABLE HOUSING AND WITH SATIN FINISH BRONZE COVER AND FRAME. CLEANOUTS IN FINISHED WALLS SHALL BE EQUAL TO JOSAM SERIES 58890, WITH POLISHED STAINLESS STEEL COVER AND SECURING SCREWS.
2. CLEANOUTS TO SIDEWALK SHALL BE WITH LEAD CAULKED CAST-IRON FITTINGS WITH BRASS COUNTERSUNK PLUG, JOSAM 58480 SET IN A 18 IN. SQUARE BLOCK OF POURED CONCRETE, 6 IN. THICK. ALL EXTERIOR CLEANOUTS SHALL BE BROUGHT TO GRADE. PVC SHALL NOT BE USED FOR CLEANOUTS TO SIDEWALK.
C. PIPE SUPPORT:
1. ALL HORIZONTAL SUSPENDED PIPE SHALL BE SUPPORTED AS REQUIRED IN SECTION 308 OF THE 2023 FLORIDA BUILDING CODE-PLUMBING.
D. PROTECTION OF PIPING SYSTEMS:
1. ALL PIPING AND PLUMBING SYSTEM COMPONENTS SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 305 OF THE 2023 FLORIDA BUILDING CODE-PLUMBING.

10. INSTALLATION OF FIXTURES AND EQUIPMENT

A. PREPARATIONS OF ROUGH-IN. SUPPORTS AND WALL FINISHES SHALL BE COMPLETED AND TESTED OR INSPECTED BEFORE FIXTURES OR EQUIPMENT ARE INSTALLED.
B. INSTALLATION:
1. MECHANICAL OR PLUMBING CONNECTIONS SHALL BE MADE WITH CORRECT FITTINGS, GASKETS OR SETTING COMPOUND FOR EACH FIXTURE. SEAL ALL BRASS AND TRIM TO WALLS AND FIXTURES WITH RESILIENT WATERPROOF COMPOUND.

11. START-UP SERVICE:

A. THE CONTRACTOR SHALL PUT ALL ITEMS INSTALLED UNDER THIS SECTION INTO OPERATION AND SHALL INSTRUCT THE OWNER'S MAINTENANCE PERSONNEL IN ALL POINTS.

12. GUARANTEE:

A. THE CONTRACTOR SHALL GUARANTEE ALL WORK IN THIS SECTION FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE AGAINST DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIALS.

13. FIXTURES AND EQUIPMENT:

A. FURNISH AND INSTALL PLUMBING FIXTURES, EQUIPMENT, DRAINS, ETC., COMPLETE WITH ALL TRIM, FITTINGS, AND OTHER DEVICES WHICH ARE CONSIDERED NECESSARY BY THE TRADE, BY CRAFT STANDARDS AND/OR BY THE ARCHITECT.

HS-1 STAINLESS STEEL HANDWASHING SINK (HANDICAP):

16-3/4"X15-1/2" 20 GAUGE 304 STAINLESS STEEL WALL MOUNTED SINGLE BOWL HANDWASHING SINK WITH BUFFED SATIN FINISH. BOWL IS 10"X14"X12". REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT. PROVIDE SPLASH MOUNT POLISHED CHROME PLATED CAST BRASS GOOSENECK FAUCET, 8" OC, WITH 4" WRISTBLADE HANDLES, 1.5 GPM AERATOR AND QUARTER TURN DISC VALVE. PROVIDE OFFSET CHROME PLATED TAILPIECE AND 17 GAUGE CAST BRASS P-TRAP WITH CLEANOUT AND TUBE WASTE DISCHARGE TO WALL. CHROME PLATED LOOSE KEY ANGLE STOP TO WALL, WITH 3/8" CHROME PLATED FLEXIBLE HOT AND COLD WATER SUPPLIES. SINK DRILLINGS SHALL ACCOMMODATE FITTING INSTALLATION ONLY, NO OTHER CAPPED OPENINGS WILL BE ALLOWED.

SINK	ELKAY CHS17162
FAUCET	ELKAY LK940GN05T4H
STRAINER	ELKAY LK-35
P-TRAP	ZURN Z-8702 PC
SUPPLY	ZURN Z-8800-LR-LK

MV-1 WATER MIXING VALVE (THERMOSTATIC MIXING):

UNDER SINK MIXING VALVE, BRONZE BODY, 0.25 GPM ACTIVATION, LIMITS HOT WATER BETWEEN 80°F & 120°F, DOUBLE THROTTLING, DUAL CHECK VALVES, INTEGRAL STRAINER WITH 40 MESH SCREEN, TAMPER RESISTANT LOCKING NUT. MEETS ASSE 1070 STANDARDS.

EXPOSED MIXING VALVE	WATTS LFUSG-B

EWH-1 ELECTRIC WATER HEATER:

ASHRAE STANDARD 90, GLASS LINED TANK SUITABLE FOR 150 PSI WORKING PRESSURE, 300-PSI TEST. FINISH OF DURABLE HIGH GLOSS BAKED ENAMEL. BLANKET GLASS FIBER INSULATION OVER ENTIRE TANK. CONTROL CIRCUIT TRANSFORMER AND MANUAL RESET HIGH TEMPERATURE LIMIT CONTROL. ASME PRESSURE AND TEMPERATURE RELIEF VALVE. WATER HEATER SHALL BE ACCEPTABLE FOR COMMERCIAL APPLICATION BY MANUFACTURER. PROVIDE 3 FULL YEAR WARRANTY, SNAP ACTION AUTOMATIC IMMERSION MOUNTED THERMOSTATS, IMMERSION TYPE HEATING ELEMENTS AND MAGNESIUM ANODE ROD. PROVIDE UNIT MOUNTED DISCONNECT SWITCH. PROVIDE INLET AND OUTLET SHUT-OFF VALVES, VACUUM RELIEF VALVE ON INLET WATER SUPPLY. PROVIDE GALVANIZED STEEL DRIP PAN. PROVIDE PRE-CHARGED EXPANSION TANK, OUTER STEEL SHELL (FLEXIBLE DIAPHRAGM TYPE), ON COLD WATER INLET SIDE OF WATER HEATER FOR THERMAL EXPANSION CONTROL, TANK VOLUME IN GALLONS SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE WATER HEATER SIZE IN GALLONS. 6 GAL 1.5KW 120V/1 PHASE.

WATER HEATER	A. O. SMITH DEL-6
VACUUM RELIEF	WATTS 36A
EXPANSION TANK	AMTROL "THERM-X-TROL"

TP TRAP PRIMER:

PROVIDE BRASS TRAP PRIMER AND DISTRIBUTION UNITS TO SEAL FLOOR DRAINS INDICATED ON DRAWINGS. TRAP PRIMER VALVES SHALL BE AUTOMATIC, SELF CONTAINED TYPE WITH NO SPRINGS OR DIAPHRAGMS AND SHALL NOT REQUIRE ADJUSTMENT. INLET AND OUTLET SIZE IS 1/2". TRAP PRIMER VALVES SHALL BE THE TYPE THAT CAN BE INSTALLED ANYWHERE ON COLD WATER PIPING SIZE 1-1/2" OR LESS. DISTRIBUTION UNITS SHALL SUPPLY 1-4 FLOOR DRAINS. TRAP PRIMER VALVES SHALL COMPLY WITH ASSE 1018. PRECISION PLUMBING PRODUCTS (PPP)

TRAP PRIMER	PPP PR-500
DISTRIBUTION UNIT	PPP DU-U

RD ROOF DRAIN:

16" DIAMETER HIGH EFFICIENT PERFORMING ROOF DRAIN WITH DURACOATED CAST-IRON BODY WITH COMBINATION MEMBRANE CLAMP/GRAVEL GUARD AND LOW SILHOUETTE POLY-DOME AND 2" HIGH OVERFLOW DAM. ROOF DRAIN WITH 6" OUTLET SHALL BE CAPABLE OF FLOWING 400 GPM WITH 2" PONDING HEIGHT.

ROOF DRAIN	ZURN Z100F-6NH FLOFORCE

EOD EMERGENCY OVERFLOW ROOF DRAIN:

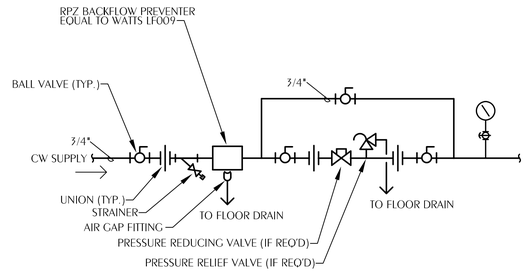
16" DIAMETER HIGH EFFICIENT PERFORMING ROOF DRAIN WITH DURACOATED CAST-IRON BODY WITH COMBINATION MEMBRANE CLAMP/GRAVEL GUARD AND LOW SILHOUETTE POLY-DOME AND 2" HIGH OVERFLOW DAM. ROOF DRAIN WITH 6" OUTLET SHALL BE CAPABLE OF FLOWING 400 GPM WITH 2" PONDING HEIGHT.

ROOF DRAIN	ZURN Z100F-6NH-89 FLOFORCE

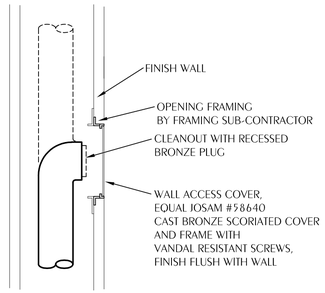
HB RECESSED HOSE BIB:

ANTI-SIPHON VACUUM BREAKER, FLUSH MOUNTING STAINLESS STEEL WALL BOX WITH HINGED COVER, 3/4 INCH HOSE THREAD, BRONZE BODY AND INTER PARTS, WHEEL HANDLE, LOOSE KEY FAUCET OPERATED CONTROL VALVE, DUAL CHECK VALVE, SCREWDRIVER OPERATED STOP VALVE IN SUPPLY, NARROW INSTALLATION.

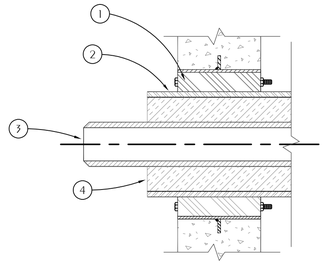
WALL FAUCET	ZURN Z1335



1 P-002 **RPZ BACKFLOW PREVENTER DETAIL**
N.T.S.



2 P-002 **CLEANOUT TO WALL**
SCALE: NONE



1. WALL SEAL APPURTENANCES PER SPECIFICATIONS
2. PIPE SLEEVE PER SPECIFICATIONS
3. PIPING
4. INSULATION

3 P-002 **TYPICAL PIPE PENETRATION OF WALL**
SCALE: NONE, EXCLUDES RF SHIELD WALL - PENETRATION AT RF SHIELD BY VENDOR

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BID DOCUMENTS

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

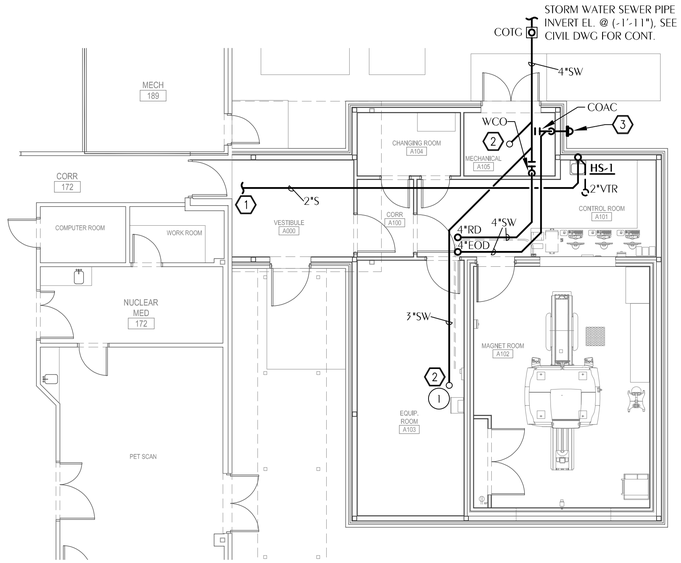
REVISIONS:

No.	Description	Date

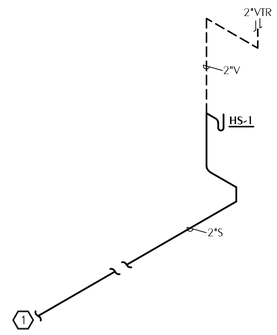
PLUMBING DETAILS & SPECIFICATIONS

PROJECT NUMBER	24107
DATED	03/28/2025

P-002



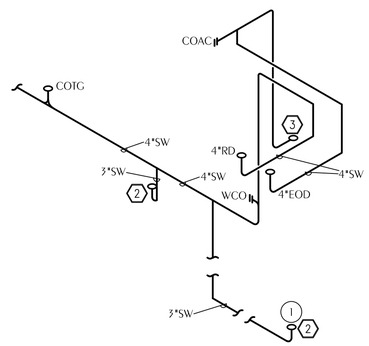
N 1 P-101 **PLUMBING SANITARY FLOOR PLAN**
SCALE: 1/8" = 1'-0"



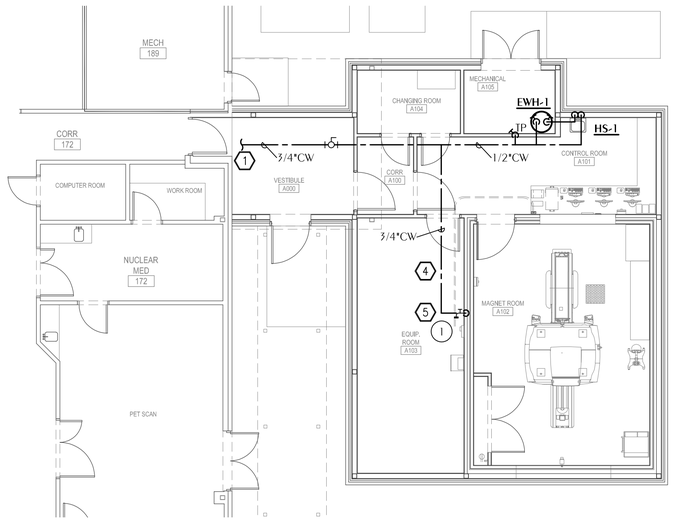
3 P-101 **PLUMBING SANITARY RISER DIAGRAM**
SCALE: NONE

SHEET NOTES

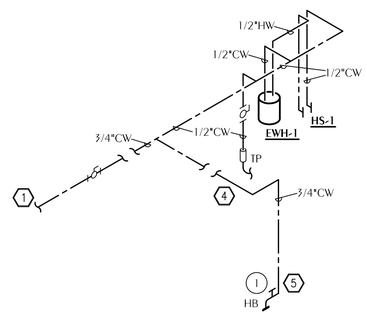
1. CONNECT TO EXISTING SYSTEMS AS APPROPRIATE. VERIFY EXISTING CONDITIONS BEFORE ROUGH-IN.
2. 3" OPEN HUB DRAIN 1" ABOVE FINISH FLOOR. PROVIDE WITH WATTS BV-1003 BACKWATER VALVE.
3. 4" DOWNSPOUT NOZZLE EQUAL TO IOSAM 25010 - COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
4. PROVIDE DUAL-CHECK VALVE TYPE BACKFLOW PREVENTER PRIOR TO CONNECTION TO MRI COOLING EQUIPMENT.
5. COORDINATE EXACT LOCATION WITH GE EQUIPMENT & ARCHITECT BEFORE ROUGH-IN.



4 P-101 **PLUMBING STORM WATER RISER DIAGRAM**
SCALE: NONE



N 2 P-101 **PLUMBING DOMESTIC WATER FLOOR PLAN**
SCALE: 1/8" = 1'-0"



5 P-101 **PLUMBING DOMESTIC WATER RISER DIAGRAM**
SCALE: NONE

REFERENCE:
FINISHED FLOOR ELEVATION = 0'-0"

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HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

PLUMBING FLOOR PLAN AND RISER DIAGRAMS

PROJECT NUMBER	24107
DATED	03/28/2025

P-101

LEGEND

AHU-1 — EQUIPMENT TAG

1 / M3 — DETAIL TAG ("1" INDICATES IDENTIFICATION NUMBER; "M3" INDICATES THE SHEET NUMBER DRAWN ON)

1 — SHEET NOTE

SUPPLY DUCT SECTION POSITIVE PRESSURE

RETURN OR EXHAUST DUCT NEGATIVE PRESSURE

AxB — RECTANGULAR DUCT SIZE ("A" INDICATES SIDE SHOWN; "B" INDICATES SIDE NOT SHOWN)

A/B — INDICATES RISE IN ELEVATION OF DUCT.

AØ — ROUND DUCT SIZE

EXTERNALLY INSULATED DUCTWORK OR DUCT BOARD

EXTERNALLY INSULATED ROUND FLEXIBLE DUCTWORK

DUCT ELBOW WITH TURNING VANES

RADIUSED DUCT ELBOW

FLEXIBLE DUCT CONNECTION

MANUAL VOLUME BALANCING DAMPER

M — MOTORIZED DAMPER

FD — FIRE DAMPER WITH ACCESS DOORS

SD — SMOKE DAMPER WITH ACCESS DOORS

BD — BACKDRAFT DAMPER

TEE WITH TURNING VANES

TRANSITION

FLEX DUCT TAKE OFF WITH MVD SIZE EQUALS DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE

BRANCH DUCT TAKEOFF WITH MVD

SR-1 / 100 — AIR DEVICE TAG. TOP LINE INDICATES TYPE OF DEVICE BOTTOM LINE INDICATES AIRFLOW IN CFM

(2)SR-1 / 100 — AIR DEVICE TAG. TOP LINE INDICATES TYPE OF DEVICE BOTTOM LINE INDICATES AIRFLOW IN CFM (2) INDICATES TYPICAL OF TWO DEVICES

TYP	TYPICAL
TEMP	TEMPERATURE
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
MA	MIXED AIR
OA	OUTDOOR AIR
TA	TRANSFER AIR
EF	EXHAUST FAN
CD	CEILING DIFFUSER
RG	RETURN GRILLE
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
CREF	CEILING ROOF EXHAUST FAN
AHU	INDOOR AIR HANDLING UNIT
BF	INLINE BOOSTER FAN
T1	THERMOSTAT, "1" INDICATES UNIT CONTROLLED
S	DUCT MOUNTED SMOKE DETECTOR
FD	FLOOR DRAIN
UC	UNDERCUT DOOR ¾"
DG	DOOR GRILLE, REFER TO DOOR SCHEDULE
AFF	ABOVE FINISHED FLOOR
FD	HORIZONTAL FIRE DAMPER
XFR	TRANSFER AIR
ESP	EXTERNAL STATIC PRESSURE
TAB	TESTING, ADJUSTING AND BALANCING
NOM	NOMINAL
VFD	VARIABLE FREQUENCY DRIVE
(F)	FUTURE
EUH	ELECTRIC UNIT HEATER
HP	HEAT PUMP
WM	WALL MOUNTED AIR HANDLER
MHP	MINI HEAT PUMP

LOUVER SCHEDULE

MARK	AIRFLOW CFM (MAX)	LOUVER SIZE (WxH) INCHES	FREE AREA FT² (MIN)	PRESSURE DROP IN. WG (MAX)
LVR-1 / CFM	240	12x12	0.29	0.10

1. PROVIDE RUSKIN EME3625MD (OR EQUAL) EXTRUDED ALUMINUM, WIND-DRIVEN RAIN RESISTANT, STATIONARY LOUVER WITH BIRDSCREEN AND FLORIDA PRODUCT APPROVAL.
2. FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.
3. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS.
4. PROVIDE BASIS OF DESIGN OR APPROVED EQUAL BY GREENHECK OR NAILOR.

VENTILATION SCHEDULE

SPACE TYPE	OUTSIDE AIR ACH	TOTAL ACH
CLASS 1 IMAGING	2	6

NOTE:
VENTILATION AIR HAS BEEN CALCULATED IN COMPLIANCE WITH ASHRAE STANDARD 62.1-2019 INDOOR AIR QUALITY METHOD.

SPLIT SYSTEM HEAT PUMP SCHEDULE

UNIT AHU/HP	BASIS OF DESIGN	MODEL HP/AHU	SA (CFM)	OA (CFM)	ESP (IN.H2O)	FAN (HP)	COOLING					HEATING				SUPPL.	AHU ELECTRICAL			HP ELECTRICAL			NOTES
							MAT° (DB/WB)	OAT° (DB/WB)	TOTAL (BTUH)	SENSIBLE (BTUH)	SEER2	MAT ° (DB)	OAT ° (DB)	TOTAL (BTUH)	HSPF2	HEAT	VOLTS/PHASE	MCA	MOP	VOLTS/PHASE	MCA	MOP	
1	TRANE	5TWR5036A/BCVE048	1300	190	0.4	0.8	77.5/64.7	95/77	32500	25300	14.3	60.9	25	34200	7.5	7kW	208/3	37.7	40.0	208/1	19	30	1,2,3,4,5,6,7,8,9,10,11

1. PROVIDE 2 " 30% FILTERS AND FILTER HOUSING SHOWN IN DETAILS.
2. EFFICIENCIES IN ACCORDANCE WITH ARI STANDARD 210/240.
3. ESP DOES NOT INCLUDE FILTER, CASING, ETC.
4. PROVIDE CONTROL KIT TO INCLUDE BLOWER CONTACTOR OR STARTER, TRANSFORMER, ELECTRIC HEATER INTLERLOCKS. ELECTRICAL SERVICE SHALL BE A SINGLE POINT OF CONNECTION.
5. PROVIDE THERMAL EXPANSION VALVES.
6. DIRECT DRIVE AHU FAN.
7. COOLING CAPACITY IS NET AND DOES NOT INCLUDE FAN HEAT.
8. PROVIDE UNIT MOUNTED CIRCUIT BREAKER FOR INDOOR AIR HANDLERS.
9. COP LISTED IS AT 47°F.
10. PROVIDE UNIT WITH HOT GAS REHEAT.
11. PROVIDE BASIS OF DESIGN OR APPROVED EQUAL BY CARRIER, DAIKIN OR YORK.

GENERAL NOTES

1. ALL DUCT DIMENSIONS ARE NET INSIDE.
2. VERIFY COLLAR SIZES ON ALL AIR TERMINALS, EQUIPMENT OUTLETS AND INLETS, TRANSITION DUCTWORK AS NECESSARY. EXTERNALLY INSULATE TRANSITIONS AT EQUIPMENT CONNECTIONS.
3. FIELD VERIFY CLEAR SPACE AVAILABLE, ROUTING PATH, AND CONFLICTS WITH STRUCTURE AND THE WORK OF OTHER TRADES PRIOR TO FABRICATING DUCTWORK. PROVIDE OFFSETS IN DUCTWORK AS REQUIRED, WHETHER SPECIFICALLY INDICATED ON DRAWINGS OR NOT. SUBMIT SHOP DRAWINGS ON DUCTWORK LAYOUT PRIOR TO COMMENCING WORK. MAINTAIN CLEARANCE AROUND ALL LIGHT FIXTURES AS REQUIRED TO REMOVE AND SERVICE FIXTURES. COORDINATE WITH ROOF TRUSSES/STRUCTURE. PRESSURE TEST ALL NEW DUCTWORK FOR LEAKS. SEE SPECIFICATIONS.
4. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, PIPING, AND DUCTWORK SUCH THAT MANUFACTURERS' RECOMMENDED CLEARANCES ARE MET FOR ALL ACCESS PANELS, MOTORS, FANS, BELTS, FILTERS AND AIR INTAKES. CONDENSATE LINES SHALL BE CLEAR OF FILTER RACK ACCESS.
5. PROVIDE DUCT FLEX CONNECTIONS & VIBRATION ISOLATION FOR ALL UNITS NOT INTERNALLY ISOLATED.
6. ALL SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR INTAKE DUCTWORK SHALL BE GALVANIZED SHEET METAL.
7. ALL AHU AND OAU FILTERS SHALL BE OF A READILY AVAILABLE SIZE, OF DISPOSABLE TYPE, AND BE ACCESSIBLE WITHOUT THE USE OF SCREWS OR OTHER MECHANICAL DEVICES REQUIRING TOOLS.
8. PROVIDE ACCESS PANELS IN CEILINGS AS REQUIRED FOR MAINTENANCE AND ADJUSTMENT OF EQUIPMENT LOCATED ABOVE CEILING. COORDINATE ALL SIZES AND LOCATIONS WITH ARCHITECT DURING SUBMITTALS. PROVIDE PLANS IF REQUIRED BY ARCHITECT.
9. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATION OF ALL EQUIPMENT AND UTILITIES.
10. CONTRACTOR SHALL SUBMIT COORDINATED DUCTWORK SHOP DRAWINGS INDICATING COORDINATION WITH ELECTRICAL, PLUMBING, AND FIRE PROTECTION, PRIOR TO BEGINNING WORK. SHOP DRAWINGS SHALL INCLUDE LOCATIONS OF THERMOSTATS, ACCESS PANELS, AIR DEVICES, DUCTWORK, ETC.
11. ALL WORK SHALL COMPLY WITH 2023 FLORIDA BUILDING CODE (8TH EDITION), 2023 FLORIDA FIRE PREVENTION CODE, AND 2022 FGI GUIDELINES FOR DESIGN AND CONSTRUCTION OF HOSPITALS.
12. A CONTRACTOR CERTIFIED IN AABC OR NEBB SHALL PERFORM TESTING AND BALANCING UPON COMPLETION OF WORK. TAB SCOPE SHALL BE VAV-1(E) AND AIR DEVICES SHOWN ON M-101. TAB REPORT SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
13. REFER TO GE HEALTHCARE AND UNIVERSAL SHIELDING CORP. DRAWINGS FOR ADDITIONAL REQUIREMENTS.

DUCTWORK NOTES

1. ALL ROUND FLEXIBLE DUCT SHALL BE FLEXMASTER TYPE 8M OR ENGINEER APPROVED EQUAL. MAXIMUM LENGTH OF ANY FLEXIBLE DUCT RUNOUT SHALL BE 5'-0". WHERE LENGTH REQUIRED EXCEEDS 5'-0", INSTALL EXTERNALLY INSULATED ROUND SNAPLOCK DUCT FOR BALANCE OF DISTANCE TO SPIN-IN TAP AT MAIN DUCT TRUNK.
2. SEAL ALL DUCT PENETRATIONS OF WALLS AND FLOORS AIRTIGHT, REGARDLESS OF WHETHER WALLS AND FLOORS ARE FIRE RATED OR NOT.
3. UNLESS OTHERWISE INDICATED, ALL SUPPLY AIR DUCTWORK UPSTREAM OF TERMINAL UNITS SHALL BE OVAL OR ROUND, SMACNA STATIC PRESSURE CLASS 3" W.G., SEAL CLASS A, SPIRAL. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
4. ALL SUPPLY AIR DUCTWORK DOWNSTREAM OF TERMINAL UNITS (EXCEPT TAKEOFFS TO SUPPLY AIR DIFFUSERS) SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
5. ALL RETURN AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS. PROVIDE ACOUSTICAL DUCT LINER WHERE INDICATED.
6. ALL OUTSIDE AIR INTAKE DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
7. STANDARD EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 1/2" W.G., SEAL CLASS A, INSULATION NOT REQUIRED.
8. AVOID ROUTING DUCTWORK AND TU'S WITHIN 6" OF TOP OF LIGHT FIXTURES WHEREVER POSSIBLE. MAINTAIN CLEARANCE BETWEEN TU'S AND DUCT INSULATION TO TOP OF LIGHTS. PROVIDE CLEARANCE ALL AROUND AIR TERMINAL UNITS AS REQUIRED FOR ROUTINE MAINTENANCE.
9. PROVIDE MVD'S AT ALL TAKEOFFS FROM MAIN DUCTS.
10. PROVIDE DUCT ACCESS PANELS AT ALL SMOKE DETECTORS AND MOTORIZED DAMPERS.

PIPING GENERAL NOTES

1. COORDINATE ALL PIPING AND ACCESSORIES WITH GE DRAWINGS AND UNIVERSAL SHIELDING CORP DRAWINGS.
2. UNDERGROUND CHILLED WATER PIPING SHALL BE FACTORY FABRICATED PREINSULATED TYPE K COPPER CARRIER PIPE WITH MINIMUM 2" THICK POLYURETHANE FOAM INSULATION AND 125 MIL THICK HDPE JACKET. COPPER-THERM BY THERMACOR OR APPROVED EQUAL.
3. ABOVE GRADE CHILLED WATER PIPING SHALL BE TYPE K COPPER, INSULATED WITH 2" THICK CELLULAR GLASS INSULATION COMPLYING WITH ASTM C552, TYPE II, CLASS 1. PROVIDE WITH ASTM C921 TYPE 1 VAPOR BARRIER. COVER ALL INSULATION WITH PVC JACKET.
4. PROVIDE SHUTOFF VALVES AS PIPING ENTERS BUILDING AND AT CONNECTION TO ICC. COORDINATE EXACT REQUIREMENTS WITH GE.

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BID DOCUMENTS

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HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

HVAC LEGEND, NOTES, AND SCHEDULES

PROJECT NUMBER 24107
DATED 03/28/2025

M-001

MINI SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE

UNIT	BASIS OF DESIGN	MODEL	TYPE	NOMINAL COOL CAPACITY (BTUH)	DESIGN COOLING EAT °F DB/WB	DESIGN COOLING CAPACITY (BTUH)		NOMINAL HEAT CAPACITY (BTUH)	DESIGN HEATING TOTAL CAPACITY (BTUH)	DESIGN HEATING EAT °F DB	AIRFLOW (CFM)	VOLTS/PHASE	FAN (WATTS)	FAN FLA (AMPS)	NOTES
						COOLING TOTAL	COOLING SENSIBLE								
WM-1.1	MITSUBISHI	PKA-A24KA8	WALL MOUNT	24000	72.8/60.3	24000	24000	15700	3200	68.9	700	FED FROM MHP	69	0.27	1,2,3,4,5,6,7,8,9,10
WM-2.1	MITSUBISHI	PKA-A30KA8	WALL MOUNT	30000	72.8/60.3	24800	23500	18300	3200	68.9	775	FED FROM MHP	69	0.27	1,2,3,4,5,6,7,8,9,10

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°(WB)
3. DESIGN COOLING CONDITIONS ARE AT 95°F AMBIENT; DESIGN HEATING CONDITIONS ARE AT 26°F AMBIENT
4. DESIGN CAPACITY IS NET CAPACITY FOR INSTALLATION ACCOUNTING FOR 65 FT PIPE RUN LENGTHS, ETC.
5. CALCULATE REFRIGERANT LINE SIZES BASED UPON FINAL FIELD PIPING LAYOUT.
6. EXPOSED (INDOOR OR OUTDOOR) REF PIPING SHALL BE HARD DRAWN COPPER.
7. PROVIDE HARD WIRED REMOTE THERMOSTAT.
8. PROVIDE CONDENSATE PUMP.
9. PROVIDE DISCONNECT.
10. PROVIDE EPA APPROVED REFRIGERANT AND FACTORY INSTALLED REFRIGERANT MONITORING SYSTEM.

MINI SPLIT SYSTEM CONDENSING UNIT SCHEDULE

UNIT	BASIS OF DESIGN	MODEL	NOMINAL COOL CAPACITY (BTUH)	DESIGN COOLING OUTDOOR TEMP DB	SEER2	NOMINAL HEAT CAPACITY (BTUH)	DESIGN HEATING OUTDOOR TEMP DB	HSPF2	VOLTS/PHASE	MCA (AMPS)	MOP (AMPS)	NOTES
MHP-1	MITSUBISHI	PUZ-A24NHA7	24000	95	21.3	15700	25	9.3	208/1	19.0	26	1,2,3
MHP-2	MITSUBISHI	PUZ-A30NHA7	30000	95	20.0	21000	25	8.8	208/1	19.0	26	1,2,3

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°(WB)
3. EFFICIENCY VALUES FOR EER, IEER, AND COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OF DUCTED AND NON-DUCTED INDOOR UNITS.

AIR DEVICE SCHEDULE

MARK	MAX AIRFLOW CFM	AIR DEVICE SIZE	DUCT CONNECTION SIZE	TITUS MODEL
CD-1 / CFM	80	9x9	6Ø	TDC
CD-2 / CFM	245	12x12	8Ø	TDC
CD-3 / CFM	245	12x12	8Ø	OMNI-AA
RG,EG,SG,TG,RR,ER				
xx-1 / CFM	450	12x12	12x12	350FL
xx-2 / CFM	600	14x14	12x12	50F-NT
xx-3 / CFM	1540	22X22	20x20	50F-NT

NOTES:
1. MAX NC=20
2. PROVIDE 2x2 LAY IN PANEL FOR AIR DEVICES IN LAY IN CEILINGS.
3. PROVIDE BEVELED MOUNTING FRAME FOR CEILING DIFFUSERS IN HARD CEILINGS.
4. PROVIDE FLAT MOUNTING FRAME FOR GRILLES LOCATED IN HARD CEILINGS.

FAN SCHEDULE

UNIT	TYPE	CFM	MAX. FAN RPM	ESP (IN. H20)	MAX. MOTOR POWER	SONES/db (MAX.)	BASIS OF DESIGN	MODEL	CONTROL	ELECTRICAL VOLTS/PHASE	NOTES
EF-1	INLINE	190	1200	0.25	1/6 HP	2.0	COOK	100SQN12D-	INTERLOCK W/ AHU-1 OA DAMPER	115/1	1,2,3,4,5,10
EF-2	ROOF	1500	1028	0.5	1/3 HP	9.6	COOK	150V17D	INTERLOCK W/ WALL SWITCH	115/1	1,2,3,4,5,6,7,8,9,10

1. PROVIDE DISCONNECT.
2. PROVIDE SOLID STATE SPEED CONTROLLER.
3. PROVIDE BACK DRAFT DAMPER.
4. PROVIDE THERMAL OVERLOAD.
5. PROVIDE DIRECT DRIVE FAN.
6. PROVIDE UPBLAST FAN WITH FLORIDA PRODUCT APPROVAL.
7. PROVIDE ROOF CURB.
8. PROVIDE ALUMINUM BIRDSCREEN.
9. PROVIDE TWO WALL SWITCHES AS LOCATED ON DRAWINGS. SWITCHES SHALL BE CONNECTED IN PARALLEL.
10. PROVIDE BASIS OF DESIGN OR APPROVED EQUAL BY GREENHECK OR ACME FAN.

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BID DOCUMENTS

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
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HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

HVAC SCHEDULE

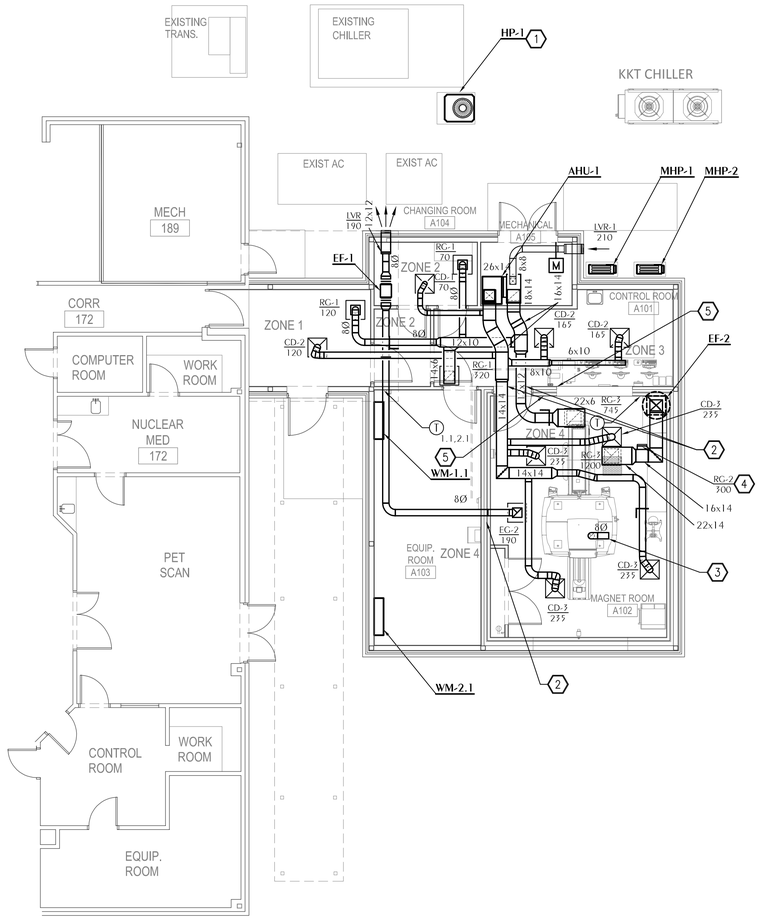
WATFORD ENGINEERING
4452 Clinton Street Marianna, Florida 32446
2449 Moores Mill Rd, Suite 100 Auburn, AL 36830
Florida CA Number: 27825
Keith A. Johnson, PE
Florida License Number: 86457
850.526.3447 / 334.209.0212
Project Number: 2025-015
Checked By: KAJ
Drawn By: JFG

PROJECT NUMBER	24107
DATED	03/28/2025

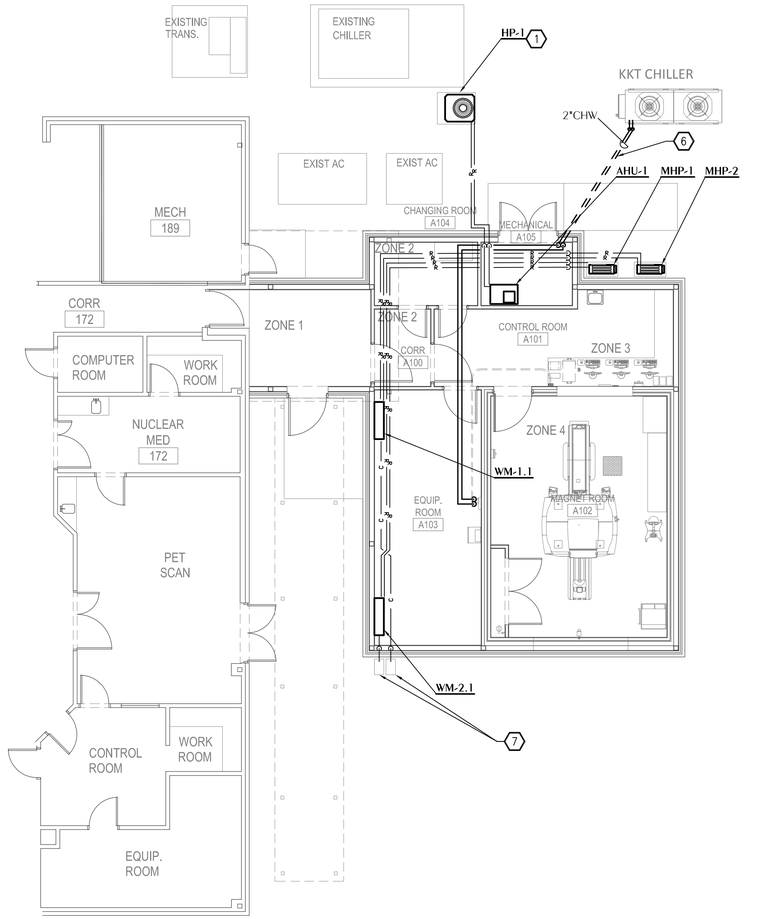
M-002

SHEET NOTES

1. COORDINATE FINAL LOCATION WITH EXISTING EQUIPMENT CLEARANCE REQUIREMENTS.
2. TRANSITION TO MRI COMPLIANT DUCTWORK WITHIN MAGNET ROOM BY MARSHIELD OR APPROVED VENDOR.
3. CRYOGENIC VENT TO ROOF AS DETAILED BY M4 - CRYOGENICS (1) ON PAGE 17 OF GE DRAWINGS. VENT SHALL BE AL 6061-T6. INSULATE VENT WITH 1.5" FLEXIBLE UNICELLULAR INSULATION. PROVIDE VENT CAP. PROVIDE ROOFTOP BARRIER PER GE DRAWINGS. COORDINATE PENETRATION OF RF CAGE CEILING WITH UNIVERSAL SHIELDING CORP. SEE SECTION A-A ON SHEET US-3 OF USC DRAWINGS.
4. PROVIDE RG-2 ABOVE CEILING, UNDER RF SHIELD. BALANCE TO 300 CFM.
5. PROVIDE WALL SWITCH FOR EF-2.
6. PROVIDE 2" COPPER PIPE TO CONNECT KKT CHILLER PROVIDED BY OTHERS WITH INTEGRATED COOLING CABINET PROVIDED BY OTHERS. PROVIDE FLOW METER IN SUPPLY PIPING. REFER TO SHEET M3 OF GE DRAWINGS FOR MORE INFORMATION.
7. ROUTE INSULATED CONDENSATE BY GRAVITY FROM UNIT TO EXTERIOR WALL AS SHOWN. DROP DOWN INSIDE WALL CAVITY AND DISCHARGE CONDENSATE 4" ABOVE SPLASH BLOCK AT 45 DEGREES ANGLE CUT. PROVIDE 20"X12"X3" PRECAST CONCRETE ARCHITECTURAL SPLASH BLOCK.



N 1 M101 **HVAC FLOOR PLAN**
SCALE: 1/8" = 1'-0"



N 2 M101 **HVAC PIPING PLAN**
SCALE: 1/8" = 1'-0"

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HVAC FLOOR PLAN

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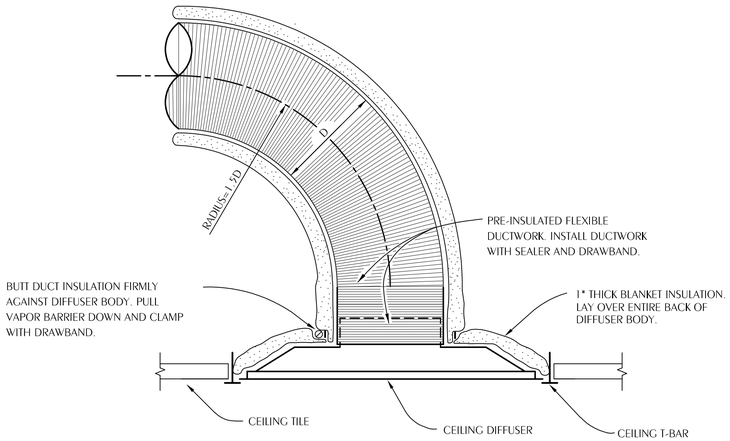
M-101

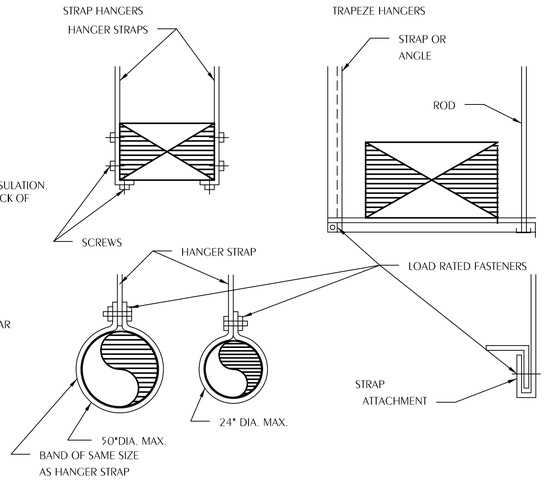


NOTES:
FLEX DUCT SHALL BE NO LONGER THAN 5'-0". FLEXIBLE DUCT SHALL HAVE REINFORCED, METALIZED POLYESTER JACKET WITH NO FIBERGLASS EROSION IN THE AIRSTREAM AND AN ENCAPSULATED WIRE HELIX. FLEX DUCT SHALL HAVE OPERATING PRESSURE OF 6" W.G. AND NEGATIVE OPERATING PRESSURE OF 0.75" W.G. FLEX DUCT SHALL HAVE R-VALUE OF R-6 AND MEET REQUIREMENTS OF UL-181, NFPA 90A AND NFPA 90B. ATCO 36 OR APPROVED EQUAL. R-8 INSIDE VENTILATED ATTIC. ATCO 31 OR APPROVED EQUAL.

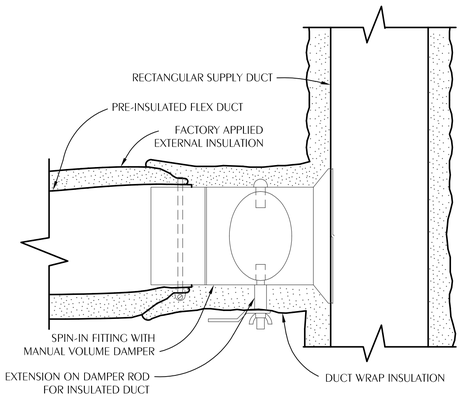
PROVIDE 24x24 LAY IN PANEL FOR DIFFUSERS IN LAY IN CEILINGS.

PROVIDE BEVELED MOUNTING FRAME FOR DIFFUSERS IN HARD CEILINGS.

1 TYPICAL CEILING DIFFUSER DETAILS
M-201 SCALE: NONE



2 TYPICAL DUCT HANGER DETAILS
M-201 SCALE: NONE



NOTES:
CONNECT FLEXIBLE DUCT TO FITTING WITH DRAWBAND AND SEALER.

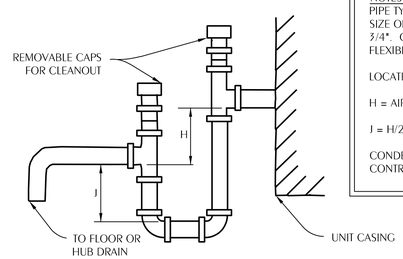
ROUND HARD DUCT RUNOUTS SHOULD START WITH SPIN-IN FITTINGS SIMILAR TO THIS DETAIL.

PROVIDE CABLE ACTIVATED DAMPER WITH ADJUSTMENT IN FACE OF CEILING DIFFUSER. FOR INACCESSIBLE TAKEOFF LOCATED ABOVE HARD CEILINGS.

FLEXIBLE INSULATION SHALL BE 2" THICK, ASTM C553, TYPE 1, CLASS B-3 WITH 1 PCF DENSITY AND UL RATED ALUMINUM FOIL VAPOR BARRIER (FSK).

WRAP OVER OPPOSED BLADE DAMPERS AFTER TEST AND BALANCE.

3 TYPICAL FLEX DUCT TAKEOFF DETAIL
M-201 SCALE: NONE



NOTES:
PIPE TYPE 'L' HARD DRAWN COPPER CONDENSATE LINE AT FULL SIZE OF UNIT CONNECTION, BUT IN NO CASE SMALLER THAN 3/4". CONDENSATE LINES SHALL BE INSULATED WITH 1/2" FLEXIBLE UNICELLULAR INSULATION.

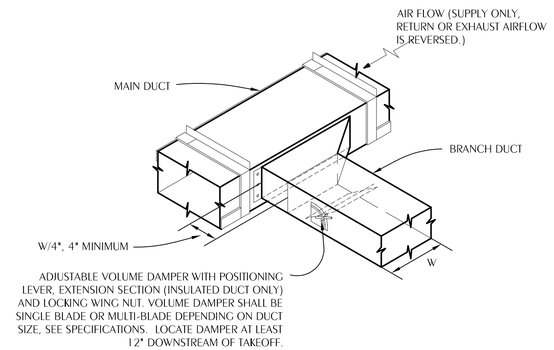
LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.

H = AIR UNIT TOTAL STATIC PRESSURE + 1"

J = H/2

CONDENSATE PIPE SHALL BE PROVIDED BY THE HVAC CONTRACTOR.

4 NEGATIVE PRESSURE CONDENSATE DRAIN TRAP
M-201 SCALE: NONE



NOTES:
PROVIDE CABLE ACTIVATED DAMPER WITH ADJUSTMENT IN FACE OF AIR DEVICE FOR INACCESSIBLE TAKEOFFS LOCATED ABOVE HARD CEILINGS.

FLEXIBLE INSULATION SHALL BE 2" THICK, ASTM C553, TYPE 1, CLASS B-3 WITH 1 PCF DENSITY AND UL RATED ALUMINUM FOIL VAPOR BARRIER (FSK)

5 TYPICAL BRANCH DUCT TAKEOFF
M-201 SCALE: NONE

NOTE:

REFER TO DETAIL 12 - "RF AIRVENT" OF UNIVERSAL SHIELDING CORP. DRAWINGS FOR PENETRATION OF RF SHIELDING INTO MAGNET ROOM.

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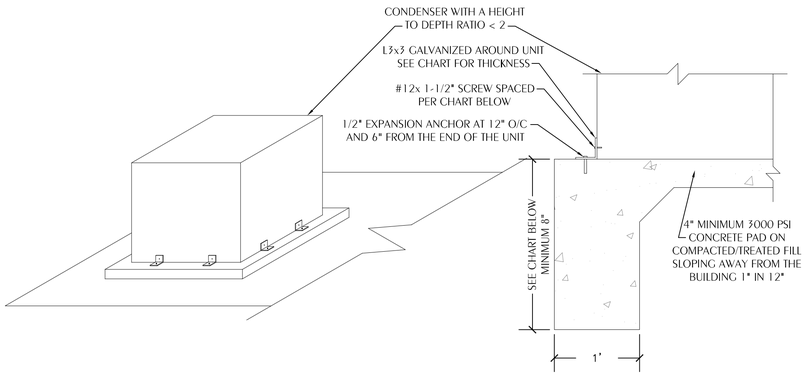
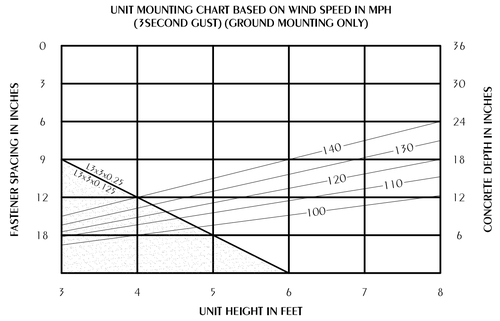
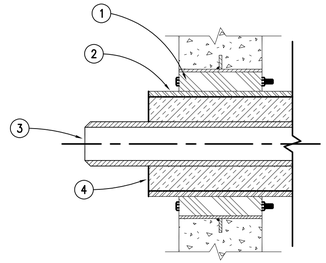
M-201





DESIGN CRITERIA:

CODE:	ASCE 7-05
VELOCITY:	SEE BELOW
Kz:	0.70
Kzt:	1.00
Kd:	0.85
IMPORTANCE:	1.15
EXPOSURE:	B
Gf:	1.3
Gf:	0.85
qz:	
100 mph	17.52 psf
110 mph	21.20 psf
120 mph	25.22 psf
130 mph	29.60 psf
140 mph	34.33 psf
Pdesign:	
100 mph	19.36 psf
110 mph	23.42 psf
120 mph	27.87 psf
130 mph	32.71 psf
140 mph	37.94 psf



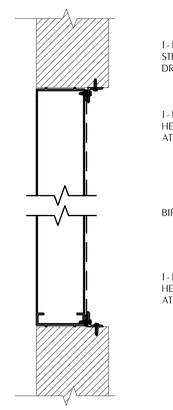
1. WALL OR FLOOR SEAL APPURTENANCES PER SPECIFICATIONS
2. PIPE SLEEVE PER SPECIFICATIONS
3. PIPING
4. INSULATION

1 OUTDOOR MECHANICAL UNIT MOUNTING DETAIL
M-202 SCALE: NONE

2 TYPICAL WALL PIPE PENETRATION
M-202 SCALE: NONE (EXCLUDES RF SHIELD WALL PENETRATION AT RF SHIELD BY VENDOR)

NOTE:

REFER TO DETAIL 12 - "RF AIRVENT" OF UNIVERSAL SHIELDING CORP. DRAWINGS FOR PENETRATION OF RF SHIELDING INTO MAGNET ROOM.



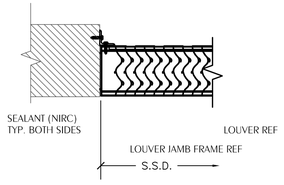
HEAD AND SILL DETAIL
N.T.S.

NOTES:

1. THE INSTALLATION SHOWN HEREIN MUST BE FOLLOWED STRICTLY TO ENSURE COMPLIANCE WITH FLORIDA BUILDING CODE PRODUCT APPROVAL.
2. CONTINUOUS INSTALLATION ANGLES AND FASTENERS ARE SHIPPED LOOSE AND REQUIRE INSTALLATION IN THE FIELD.
3. SHIMS MAY BE REQUIRED TO ACHIEVE CONSISTENT CLEARANCE BETWEEN LOUVER AND OPENING ON ALL SIDES.

1-1/2" x 1-1/2" x 1/4" x 2" CLIP ANGLE AT 3" FROM ENDS AND 22" MAX. C-C. ATTACH ANGLE TO JAMB WITH (2) #10-16 x 1-1/2" GRADE 2 SELF DRILLING SCREWS AND TO STRUCTURE WITH (1)1/4"Ø A307 BOLT OR (1)1/4"-14 GRADE 2 SELF DRILLING SCREW.

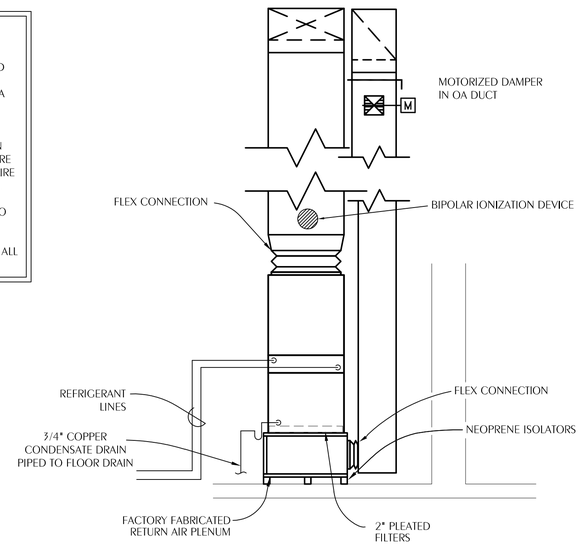
BIRDSCREEN



LOUVER SECTION AT JAMB
N.T.S.

3 WALL LOUVER DETAIL
M-202 SCALE: NONE RUSKIN EME3625MD OR EQUAL

MIAMI-DADE NOA NO. 23-1116.02

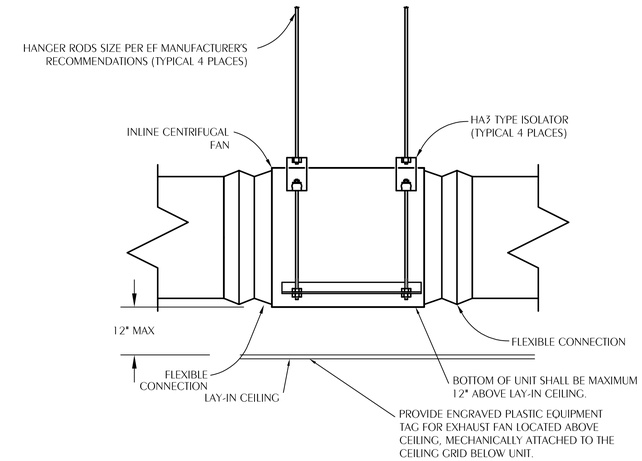


NOTES:
SECURE REFRIGERANT LINES AND CONDENSATE PIPING WITH UNISTRUT.

PROVIDE FACTORY FABRICATED RETURN AIR PLENUM OR ENGINEER APPROVED EQUAL.

SIZE COPPER CONDENSATE LINE AT FULL SIZE OF UNIT CONNECTION, BUT IN NO CASE SMALLER THAN 3/4".

4 VERTICAL UPFLOW AHU DETAIL
M-202 SCALE: NONE



5 INLINE FAN DETAIL
M-202 SCALE: NONE

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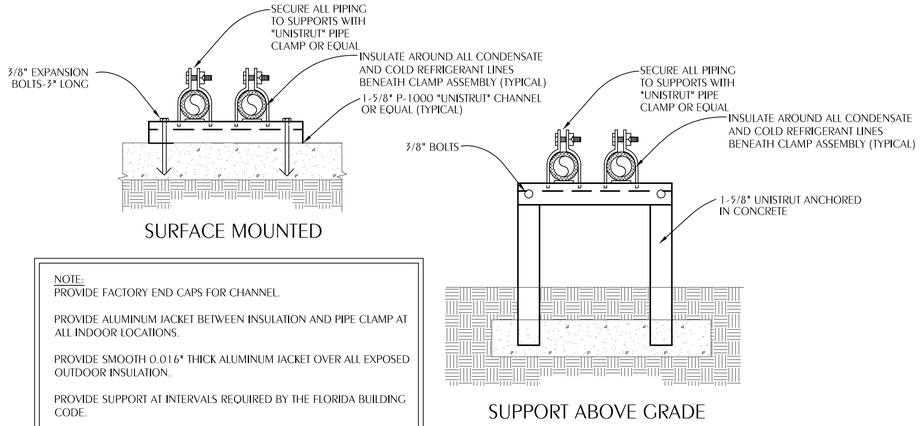
M-202



NOTE:
PROVIDE FACTORY END CAPS FOR CHANNEL.

PROVIDE ALUMINUM JACKET BETWEEN INSULATION AND PIPE CLAMP AT ALL INDOOR LOCATIONS.

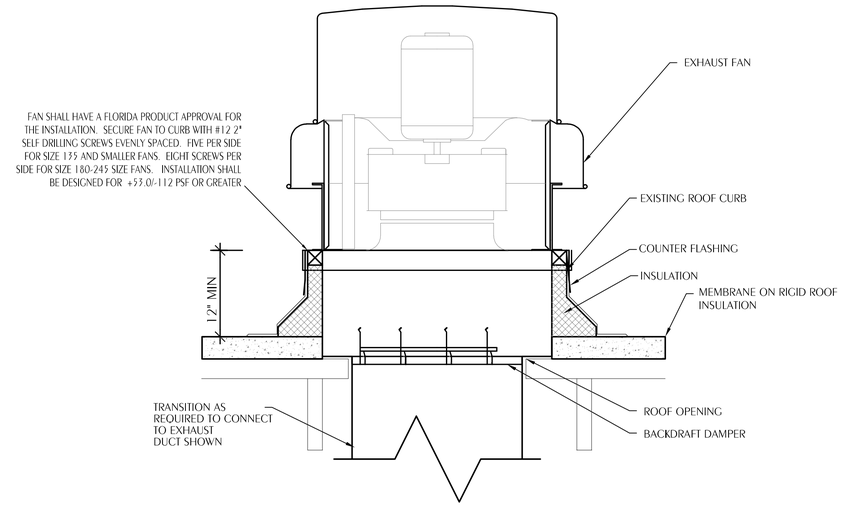
PROVIDE SMOOTH 0.016" THICK ALUMINUM JACKET OVER ALL EXPOSED OUTDOOR INSULATION.

PROVIDE SUPPORT AT INTERVALS REQUIRED BY THE FLORIDA BUILDING CODE.

INSULATE ALL REFRIGERANT PIPING WITH 3/4" UNICELLULAR INSULATION.

1 M-203 TYPICAL EXTERIOR PIPING SUPPORT DETAIL

SCALE: NONE



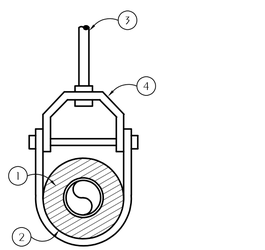
NOTES:
EXISTING ROOF IS METAL DECK WITH CONCRETE LAYER UNDER STEEL JOIST AT 4'-0" ON CENTER.

CURB SHALL BE INSTALLED LEVEL AS REQUIRED BY MANUFACTURER'S FLORIDA PRODUCT APPROVAL.

CURB SHALL BE A MINIMUM OF 12" ABOVE FINISHED ROOF SURFACE.

2 M-203 ROOFTOP EXHAUST FAN DETAIL

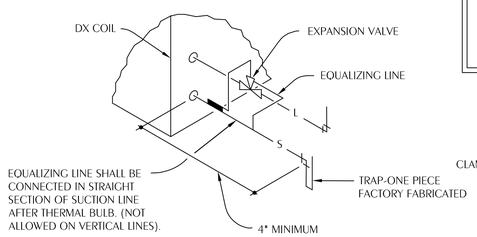
SCALE: NONE MIAMI-DADE NOA NO. 23-0815.03



1. INSULATION
2. PIPE COVERING PROTECTION SADDLE
3. HANGER ROD FASTEN TO STRUCTURE PER SPECIFICATION
4. CLEVIS TYPE HANGER

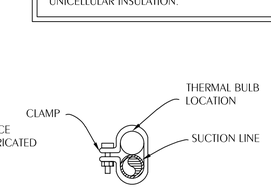
3 M-203 OVERHEAD PIPE SUPPORT

SCALE: NONE

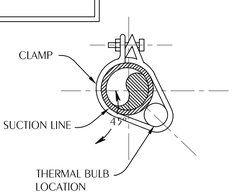


NOTES:
THERMOSTATIC BULB TO BE AS CLOSE TO COIL AS POSSIBLE NOT ALLOWED ON VERTICAL LINES.

INSULATE REFRIGERANT LINES WITH 3/4" FLEXIBLE UNICELLULAR INSULATION.



5/8" O.D. OR SMALLER



7/8" O.D. OR LARGER

4 M-203 REFRIGERANT COIL CONNECTION DETAIL

SCALE: NONE

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M-203

22017
CONSTRUCTION DWGS
2025-04-04

DEMOLITION NOTES

1. PLANNED INTERRUPTIONS OF UTILITY SERVICE TO ANY FACILITY OR AREAS WITHIN ANY FACILITY AFFECTED BY THIS CONTRACT, SHALL BE CAREFULLY PLANNED AND COORDINATED WITH THE FACILITY PERONNEL IN ADVANCE OF THE REQUESTED INTERRUPTION. THE CONTRACTOR SHALL NOT INTERRUPT SERVICES UNTIL SPECIFIED APPROVAL HAS BEEN GRANTED. THE REQUEST SHALL INDICATE SERVICES AND AREAS TO BE AFFECTED, DATE AND TIME OF INTERRUPTION AND DURATION OF OUTAGE. REQUEST FOR INTERRUPTION OF SERVICE WILL NOT BE APPROVED UNTIL ALL EQUIPMENT AND MATERIAL REQUIRED FOR THE COMPLETION OF THAT PARTICULAR PHASE OF WORK ARE ON THE JOB SITE.
2. ALL DEMOLITION WORK REQUIRED SHALL BE PERFORMED WITH CARE SO AS NOT TO INTERRUPT OTHER EXISTING SERVICES (WATER, GAS, ELECTRICAL, SEWER, SPRINKLERS, ETC.). IF ACCIDENTAL UTILITY INTERRUPTION, DAMAGE, ETC., RESULTS FROM WORK PERFORMED BY THE CONTRACTOR, THE AFFECTED UTILITY OR SERVICE SHALL BE RETURNED TO ITS ORIGINAL CONDITION WITHOUT DELAY, BY AND AT THE EXPENSE OF THE CONTRACTOR, USING SKILLED WORKMEN OF THE TRADE INVOLVED.
3. REMOVE ALL OUTLETS, PULL BOXES, JUNCTION BOXES, ETC., AS REQUIRED TO COMPLETELY REMOVE THE ELECTRICAL ITEMS SHOWN FOR DEMOLITION UNLESS NOTED TO REMAIN. DISCONNECT AND REMOVE ALL ELECTRICAL PROVISIONS TO EQUIPMENT BEING REMOVED.
4. REMOVE ALL WIRING, CONDUIT, RACEWAYS, OUTLET BOXES, SUPPORTING APPARATUS ETC., AS REQUIRED.
5. SYMBOLS SHOWN ARE TYPICAL AND LOCATIONS ARE APPROXIMATE AND ARE NOT INTENDED TO LIMIT THE AMOUNT OF DEMOLITION. COORDINATE WITH EXISTING CONDITIONS AND THESE NOTES AND REMOVE ALL APPLICABLE SYSTEMS AND COMPONENTS CONFLICTING WITH FINISHED DESIGN INTENT.
6. EXISTING BRANCH WIRING SHOWN IS DIAGRAMMATICAL ONLY AND IS BASED UPON EXISTING AS-BUILT DRAWINGS AND SURVEYS. COORDINATE WITH ACTUAL EXISTING CONDITIONS FOR NUMBER OF CONDUCTORS PER CONDUIT AND EXACT LOCATIONS OF CONDUIT RUNS AND EQUIPMENT.
7. ALL FEEDERS, SYSTEMS, CONTROL WIRING, MISCELLANEOUS AUXILIARY SYSTEMS, ETC., PASSING THROUGH THE AREA OF WORK SHALL BE MAINTAINED AT ALL TIMES, REMAIN IN SERVICE, CONTINUOUS AND UNINTERRUPTED. ANY DAMAGE, DISRUPTION OR DISCONNECTION SHALL BE IMMEDIATELY REPAIRED, REPLACED AND/OR REROUTED AS REQUIRED TO MAINTAIN CONTINUITY OF SYSTEMS. ANY EXISTING SERVICE OR OPERATING SYSTEM WHICH MUST BE INTERRUPTED SHALL BE SUPPLIED WITH A TEMPORARY SERVICE FOR CONTINUATION OF THE NORMAL OPERATIONS OF THE FACILITY.
8. ANY EQUIPMENT THAT REQUIRES REMOVAL FROM EXISTING LOCATION FOR RE-USE OR TO BE RETURNED TO OWNER SHALL BE INSPECTED AND TESTED TO CONFIRM EQUIPMENT OPERATES AS INTENDED. OWNER SHALL BE NOTIFIED OF ANY EQUIPMENT THAT DOES NOT OPERATE AS INTENDED BEFORE REMOVAL.
9. CONCEALED CONDUIT THAT CANNOT BE REMOVED DUE TO INACCESSIBILITY MAY BE ABANDONED. CONDUCTORS SHALL BE REMOVED AND CONDUIT CUT FLUSH WITH SURFACE. INSTALL PLUG 6" INTO CONDUIT AND FILL REMAINING CONDUIT WITH CONCRETE, GROUT, OR OTHER PERMANENT FILLER FLUSH WITH SURFACE.
10. OUTLET BOXES THAT CANNOT BE REMOVED DUE TO FLUSH MOUNTING IN PARTITIONS SHALL BE FILLED WITH GROUT, PATCHED AND FINISHED FLUSH TO MATCH EXISTING WALL CONDITIONS.
11. IN GENERAL, THE WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
    a. PROVIDE ALL DEMOLITION AS REQUIRED OF EXISTING SYSTEMS REMOVING ALL ITEMS THAT CONFLICT WITH FINISHED DESIGN INTENT AS INDICATED ABOVE.
    b. MODIFY, REPLACE, REPAIR, REVISE ETC., EXISTING SYSTEMS AND/OR EQUIPMENT.
    c. EXTEND EXISTING SYSTEMS AS REQUIRED TO FUNCTION AS SPECIFIED AND IN ACCORDANCE WITH SYSTEM REQUIREMENTS.
    d. NEW SYSTEM COMPONENTS SHALL MATCH EXISTING SYSTEMS PROVISIONS AND BE COMPLETELY COMPATIBLE AND IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. WHEN REQUIRED, APPROVAL FROM A SYSTEM MANUFACTURER SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO INSTALLING ANY NEW EQUIPMENT OR DEVICES TO AN EXISTING SYSTEM.
    e. ALL EQUIPMENT, DEVICES, OUTLETS, COMPONENTS, ETC., TO BE REUSED SHALL BE CLEANED, REPAIRED AND PLACED IN OPERATING CONDITION. LUMINARIES NOTED TO BE REUSED SHALL BE CLEANED, REPAIRED, PROVIDED WITH NEW LAMPS AND PLACED IN OPERATING CONDITION.
    f. EXISTING OUTLET BOXES MAY BE USED AS NOTED IF OF THE PROPER CONFIGURATION AND SIZE REQUIRED. MODIFICATIONS SHALL BE MADE WHEN REQUIRED SUCH AS PROVIDING EXTENSION RINGS, LOCKNUTS, BUSHINGS, ETC.
    g. EXISTING PANELBOARDS SHALL BE UTILIZED TO THE EXTENT SHOWN ON THE DRAWINGS AND MODIFIED AS REQUIRED TO FACILITATE THE NEW REQUIREMENTS AS INDICATED HEREIN OR SHOWN ON THE DRAWINGS. NEW CIRCUIT BREAKERS SHALL BE OF THE SAME MANUFACTURER, FRAME SIZE, SHORT CIRCUIT RATING AND TYPE AS EXISTING. WHERE APPLICABLE, THE CONTRACTOR SHALL BE REQUIRED TO FURNISH AND INSTALL ADDITIONAL MOUNTING HARDWARE AS REQUIRED BY THE MANUFACTURER.
    h. WHEN EXISTING DEVICES, SWITCHES, EQUIPMENT ETC., ARE NOTED TO BE REMOVED AND THE CIRCUIT(S) SERVING SUCH ITEMS SERVES OTHER ITEMS OR DEVICES WHICH ARE TO BE MAINTAINED, THE CONTRACTOR SHALL REROUTE, EXTEND, MODIFY, ETC., EXISTING CIRCUITS AS REQUIRED TO MAINTAIN COMPLETE AND OPERATING SYSTEMS.

GENERAL NOTES

A. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT SIZE AND LOCATION OF EQUIPMENT WHICH IS FURNISHED BY OTHERS AND CONNECTED BY ELECTRICAL.

B. RECEPTACLES, SWITCHES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.

C. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGHING-IN WALL FOR SWITCHES.

D. LOCATION OF LIGHTING FIXTURES, DISCONNECT SWITCHES, ETC. FOR MECHANICAL EQUIPMENT/ROOM SHALL BE COORDINATED WITH FINAL MECHANICAL EQUIPMENT LOCATION TO PROVIDE NATIONAL ELECTRIC CODE REQUIRED ACCESS SPACE.

E. FINAL CONNECTION TO ALL MOTORS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION.

F. ALL EXIT AND EMERGENCY FIXTURES SHALL BE CONNECTED TO LIGHT CIRCUIT AHEAD OF LOCAL SWITCH.

G. ALL PANELBOARDS, BACKBOARDS, TERMINAL CABINETS, ETC SHALL HAVE CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.

H. PROVIDE GREEN GROUND CONDUCTOR IN ALL CIRCUITS - SIZE PER N.E.C.

I. ALL EXPOSED CONDUITS, BOXES, STRAPS AND HANGERS IN THE CONTRACT AREA WHETHER NEW OR EXISTING THAT ARE PART OF THE ELECTRICAL SYSTEM SHALL BE PAINTED TO MATCH ADJACENT FINISH.

J. GENERAL CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. FAILURE TO DO SO INDICATES THAT THE CONTRACTOR ACCEPTS THE CONDITIONS AS THEY EXIST, AND SHALL PERFORM THE WORK REQUIRED AS SHOWN AND SPECIFIED.

K. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND REVIEW THE MECHANICAL AND SPECIAL EQUIPMENT SUBMITTALS PRIOR TO SUBMITTING THE ELECTRICAL SUBMITTALS. ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRE SIZE CHANGES RESULTING FROM THIS REVIEW SHALL ALSO BE SUBMITTED FOR APPROVAL.

L. FIRE ALARM LOW VOLTAGE SOURCE AND BATTERY STANDBY SHALL ENERGIZE ALL ITEMS IN FIRE ALARM SYSTEM THAT REQUIRE POWER.

M. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FAULT CURRENT CALCULATIONS FOR THE SERVICE EQUIPMENT AND SHALL MARK THE EQUIPMENT WITH THE AVAILABLE FAULT CURRENT AND DATE OF THE CALCULATION PER NEC 110.24. REFER TO TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL.

N. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ARC FAULT LABELS PER NFPA 70E ARTICLE 110.16 FOR NEW EQUIPMENT. THE OWNER SHALL PROVIDE AVAILABLE CALCULATION DATA FOR THE EXISTING EQUIPMENT IN THE ELECTRICAL SYSTEM. REFER TO TYPICAL ARC FLASH HAZARD LABEL DETAIL.

O. PROVIDE NEUTRAL AT ALL LINE VOLTAGE SWITCH LOCATIONS PER N.E.C. 404.2(C).

P. PROVIDE 'LSI' TRIP UNITS FOR ALL BREAKERS GREATER THAN OR EQUAL TO 200A.

Q. PROVIDE BUSHINGS ON ALL CONDUIT.

R. COMPLY WITH ALL LOCAL CODE, LAWS, AND ORDINANCES APPLICABLE TO ELECTRICAL WORK, THE STATE BUILDING CODE AND THE NATIONAL ELECTRIC CODE. OBTAIN ALL PERMITS REQUIRED BY LOCAL ORDINANCES.

S. OBTAIN ARCHITECTS APPROVAL OF ALL LIGHT FIXTURES, SWITCHES, RECEPTACLES, PANELBOARDS, ETC. PRIOR TO PURCHASING.

T. THE ELECTRICAL WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. ALL NOT SO INSTALLED SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.

U. THE CONTRACTOR SHALL LEAVE THE ENTIRE ELECTRICAL SYSTEM INSTALLED IN PROPER WORKING ORDER, AND SHALL REPLACE WITHOUT ADDITIONAL COST, ALL WORK OR MATERIAL WHICH MAY DEVELOP DEFECTS, (ORDINARY WEAR AND TEAR OR DAMAGE RESULTING FROM IMPROPER HANDLING EXCEPTED) WITHIN A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER.

V. ALL WORK SHALL BE INSTALLED IN CONCEALED TYPE CONSTRUCTION. UNDERGROUND CONDUITS UP TO FIRST BOX IN CONCEALED CONSTRUCTION MAY BE SCH.40 PVC. EXTERIOR EXPOSED WORK SHALL BE I.M.C. BRANCH CIRCUIT CONDUIT RUN IN OPEN SPACES ABOVE CEILING OR IN WALLS MAY BE THINWALL (E.M.T.) CONDUIT 1/2" MIN. SIZE.

W. ALL CONDUCTORS LESS THAN 100A. SHALL BE COPPER #12 & #10 SOLID, #8 AND LARGER STRANDED, #6 AND SMALLER TO BE TYPE THWN, 600 VOLT INSULATION AND TYPE THWN OR THHN FOR #4 AND LARGER. ALUM. CONDUCTORS MAY BE USED FOR 100A. AND LARGER ONLY WHERE USED WITH COMPRESSION TERMINATIONS.

X. PROVIDE GROUNDING PER NATIONAL ELECTRIC CODE.

GE HEALTHCARE NOTES

A. ALL LIGHTING FIXTURES AND ASSOCIATED COMPONENTS MUST MEET ALL RF SHIELDED ROOM AND RF GROUNDING REQUIREMENTS.

B. ALL REMOVABLE LIGHTING FIXTURES AND ASSOCIATED COMPONENTS MUST BE NON-MAGNETIC.

C. ALL LIGHTING MUST USE DIRECT CURRENT (THE DC MUST HAVE LESS THAN 5% RIPPLE).

D. 300 LUX MUST BE PROVIDED AT THE FRONT OF THE MAGNET FOR PATIENT ACCESS AND ABOVE THE MAGNET FOR SERVICING.

E. FLUORESCENT LIGHTING MUST NOT BE USED IN THE MAGNET ROOM.

F. LIGHTING MUST BE ADJUSTED USING A DISCRETE SWITCH OR A VARIABLE DC LIGHTING CONTROLLER.

G. SCR DIMMERS OR RHEOSTATS MUST NOT BE USED.

H. DC LED LIGHTING MAY BE USED IF THE DC POWER CONVERTER AND RF SOURCES ARE ALL LOCATED OUTSIDE THE MAGNET ROOM RF SHIELD.

I. LED LIGHTING COULD CAUSE IMAGE QUALITY ISSUES DUE TO RF INTERFERENCE. MAKE SURE A MR-COMPATIBLE LED LIGHTING SOLUTION IS CHOSEN.

J. BATTERY CHARGERS (E.G., USED FOR EMERGENCY LIGHTING) MUST BE LOCATED OUTSIDE THE MAGNET ROOM.

K. LED LIGHTING OR SHORT FILAMENT LENGTH INCANDESCENT BULBS ARE RECOMMENDED.

L. LINEAR LAMPS ARE NOT RECOMMENDED DUE TO THE HIGH BURNOUT RATE.

M. ALUMINUM OR SOLID WIRES ARE NOT ALLOWED.

N. IT IS RECOMMENDED THAT ALL WIRES BE COLOR CODED, AS REQUIRED IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES.

O. ROUTING OF CABLE DUCTWORK, CONDUITS, ETC., MUST RUN DIRECT AS POSSIBLE OTHERWISE MAY RESULT IN THE NEED FOR GREATER THAN STANDARD CABLE LENGTHS (REFER TO THE INTERCONNECTION DIAGRAM FOR MAXIMUM USABLE LENGTHS POINT TO POINT).

P. CONDUIT TURNS TO HAVE LARGE, SWEEPING BENDS WITH MINIMUM RADIUS IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES.

Q. IN SOME CASES GEHC WILL SPECIFY GROUND WIRES TO BE SIZED LARGER THAN CODE. IN THESE SITUATIONS, THE GEHC SPECIFICATION MUST BE FOLLOWED.

R. A SPECIAL GROUNDING SYSTEM IS REQUIRED IN ALL PROCEDURE ROOMS BY SOME NATIONAL AND LOCAL CODES. IT IS RECOMMENDED IN AREAS WHERE PATIENTS MIGHT BE EXAMINED OR TREATED UNDER PRESENT, FUTURE, OR EMERGENCY CONDITIONS. CONSULT THE GOVERNING ELECTRICAL CODE AND CONFER WITH APPROPRIATE CUSTOMER ADMINISTRATIVE PERSONNEL TO DETERMINE THE AREAS REQUIRING THIS TYPE OF GROUNDING SYSTEM.

S. PHYSICAL CONNECTION OF PRIMARY POWER TO GEHC EQUIPMENT IS TO BE MADE BY CUSTOMERS ELECTRICAL CONTRACTOR WITH THE SUPERVISION OF A GEHC REPRESENTATIVE. THE GEHC REPRESENTATIVE WOULD BE REQUIRED TO IDENTIFY THE PHYSICAL CONNECTION LOCATION, AND INSURE PROPER HANDLING OF GEHC EQUIPMENT.

T. GEHC CONDUCTS POWER AUDITS TO VERIFY QUALITY OF POWER BEING DELIVERED TO THE SYSTEM. THE CUSTOMER'S ELECTRICAL CONTRACTOR IS REQUIRED TO BE AVAILABLE TO SUPPORT THIS ACTIVITY.

U. EVERY INSTALLATION IS UNIQUE. THE ELECTRICAL CONTRACTOR WILL BE REQUIRED TO SUPPORT THE INSTALLATION OF THE GEHC EQUIPMENT BY PROVIDING KNOCKOUTS, GROMMETED OPENINGS, BUSHINGS, ETC. AS REQUIRED. ALL POWER CONNECTIONS TO BE PERFORMED BY THE ELECTRICIAN.

V. ALL JUNCTION BOXES, CONDUIT, DUCT, DUCT DIVIDERS, SWITCHES, CIRCUIT BREAKERS, CABLE TRAY, ETC., ARE TO BE SUPPLIED AND INSTALLED BY CUSTOMERS ELECTRICAL CONTRACTOR. ALL JUNCTION BOXES SHALL BE PROVIDED WITH COVERS.

W. CONDUIT AND DUCT RUNS SHALL HAVE GRADUAL SWEEP RADIUS BENDS.

X. CONDUITS AND DUCT ABOVE CEILING OR BELOW FINISHED FLOOR MUST BE INSTALLED AS NEAR TO CEILING OR FLOOR AS POSSIBLE TO REDUCE RUN LENGTH.

Y. CEILING MOUNTED JUNCTION BOXES ILLUSTRATED ON THE GEHC PLAN MUST BE INSTALLED FLUSH WITH FINISHED CEILING.

Z. DUCTWORK SHALL BE METAL WITH DIVIDERS AND HAVE REMOVABLE, ACCESSIBLE COVERS.

AA. DUCTWORK SHALL BE CERTIFIED/RATED FOR ELECTRICAL POWER PURPOSES.

AB. DUCTWORK SHALL BE ELECTRICALLY AND MECHANICALLY BONDED TOGETHER IN AN APPROVED MANNER.

AC. PVC AS A SUBSTITUTE MUST BE USED IN ACCORDANCE WITH ALL LOCAL AND NATIONAL CODES.

AD. ALL OPENINGS IN RACEWAY AND ACCESS FLOORING ARE TO BE CUT OUT AND FINISHED OFF WITH GROMMET MATERIAL BY THE CUSTOMERS CONTRACTOR.

AE. ELECTRICAL CONTRACTOR TO PROVIDE MEASURED PULL STRINGS IN ALL CONDUIT AND RACEWAY RUNS.

AF. PROVIDE 10 FOOT PIGTAILS AT ALL JUNCTION POINTS

AG. GROUNDING IS CRITICAL TO EQUIPMENT FUNCTION AND PATIENT SAFETY. SITE MUST CONFORM TO WIRING SPECIFICATIONS SHOWN ON THE GEHC PLAN.

AH. YOUR NEW GE HEALTHCARE IMAGING MODALITY WILL REQUIRE LOCAL AND REMOTE CONNECTIVITY TO ENABLE OUR FULL RANGE OF DIGITAL SUPPORT:

LOCAL CONNECTIVITY - THIS ALLOWS YOUR SYSTEM TO CONNECT TO LOCAL DEVICES SUCH AS PACS AND MODALITY WORKLIST. WE WILL REQUIRE NETWORK INFORMATION TO CONFIGURE THE SYSTEM(S), AND A LIVE ETHERNET PORT(S) PRIOR TO THE DELIVERY OF THE SYSTEM(S).

REMOTE CONNECTIVITY - YOUR GE HEALTHCARE SERVICE WARRANTY INCLUDES INSITE™ (APPLICABLE TO INSITE CAPABLE PRODUCTS), A POWERFUL BROADBAND-BASED SERVICE WHICH ENABLES DIGITAL TOOLS THAT CAN HELP GUARD YOUR HOSPITAL AGAINST EQUIPMENT DOWNTIME AND REVENUE LOSS BY QUICKLY CONNECTING YOU TO A GE HEALTHCARE EXPERT.

AI. DEPENDING ON PRODUCT FAMILY AND SOFTWARE VERSION, IMAGING SYSTEMS CAN BE CONNECTED IN ONE OF THE FOLLOWING METHODS:

TLS OVER TCP PORT 443 (PREFERRED METHOD FOR NEW PRODUCTS) VIA: DNS RESOLUTION, CUSTOMER-PROVIDED PROXY, OR GE PROXY (AVAILABLE IN SOME REGIONS)

SITE-TO-SITE IPSEC VPN TUNNEL.

AJ. PLEASE PROVIDE THE GE PROJECT MANAGER WITH THE CONTACT INFORMATION FOR THE RESOURCE THAT CAN PROVIDE INFORMATION REQUIRED TO SET UP THESE CONNECTIONS. GEHC WILL SEND OUT COMMUNICATION TO THESE CONTACTS, WHICH WILL INCLUDE THE PROJECT'S CONNECTIVITY REQUIREMENTS, AND A CONNECTIVITY FORM. THIS FORM WILL NEED TO BE COMPLETED AND RETURNED TO GEHC PRIOR TO DELIVERY OF THE SYSTEM TO ENSURE THE SYSTEM IS TESTED AND CONNECTIVITY IS ENABLED PRIOR TO THE COMPLETION OF THE INSTALLATION.

ABBREVIATIONS

1P	ONE POLE	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
2P	TWO POLE	GND	GROUND
3P	THREE POLE	HP	HORSEPOWER
4P	FOUR POLE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING
A	AMPERE	Z	HERTZ (CYCLE) PER SECOND
AC	ALTERNATING CURRENT	JB	JUNCTION BOX
AFF	ABOVE FINISHED FLOOR	KCMIL	THOUSAND CIRCULAR MILS
AHU	AIR HANDLING UNIT	KVA	KILOVOLT AMPERE
AIC	AMPERE INTERRUPTING CAPACITY	KW	KILOWATT
AWG	AMERICAN WIRE GAUGE	LTG	LIGHTING
BLDG	BUILDING	LV	LOW VOLTAGE
C	CONDUIT	LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, AND GROUND TRIP UNITS
CB	CIRCUIT BREAKER	MCB	MAIN CIRCUIT BREAKER
CKT	CIRCUIT	MLO	MAIN LUGS ONLY
CU	COPPER	MTG	MOUNTING
DISC	DISCONNECT	NEC	NATIONAL ELECTRICAL CODE
DN	DOWN	Ø	PHASE
DWG	DRAWING	PNL	PANELBOARD
ECB	ENCLOSED CIRCUIT BREAKER	SEC	SECONDARY
EF	EXHAUST FAN	SW	SWITCH
ELEC	ELECTRICAL	UG	UNDERGROUND
EWC	ELECTRIC WATER COOLER	V	VOLT
FA	FIRE ALARM	W	WATT
FLA	FULL LOAD AMPS	XFMR	TRANSFORMER

REFERENCE DESIGNATIONS

SYMBOL	DESCRIPTION
1	KEYNOTE REFERENCE
1	FEEDER NOTE REFERENCE
1	REVISION REFERENCE
	REVISION CLOUD MARKS REVISED PORTION OF DRAWING.

Sheet List Table

APPLICABLE CODE REFERENCES

FLORIDA BUILDING CODE, 8TH EDITION 2023
NATIONAL ELECTRIC CODE (NEC) NFPA 70 2020
NFPA 72, 2019 EDITION, NATIONAL FIRE ALARM AND SIGNALING CODE.
NFPA 1, THE FIRE CODE FLORIDA 2021 EDITION
NFPA 101, THE LIFE SAFETY CODE®, FLORIDA 2021 EDITION
FLORIDA FIRE PREVENTION CODE (FFPC) 2023
GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF HOSPITALS, 2022 EDITION.

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BID DOCUMENTS

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

LEGEND AND NOTES

PROJECT NUMBER	24107
DATED	03/28/2025

E-001

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24110 Job No.

22017
CONSTRUCTION DWGS
2025-04-04

ELECTRICAL EQUIPMENT

SYMBOL	DESCRIPTION	SPECIFICATION
	SURFACE MOUNTED PANEL; LINE TO GROUND VOLTAGE LESS THAN 150V; TYP. 208Y/120V	SEE PANEL SCHEDULE
	SURFACE MOUNTED PANEL; LINE TO GROUND VOLTAGE GREATER THAN 150V; TYP. 480Y/277V	SEE PANEL SCHEDULE
T	TRANSFORMER	SEE RISER
	NON-FUSED DISCONNECT	SEE EQUIPMENT SCHEDULE
DESIGNATION	**DESCRIPTION**	
MDP	EQUIPMENT NAME INDICATION; EXAMPLE SHOWN AS "MDP"	
	DISCONNECT SIZE INDICATION SHALL BE AMPS/POLES/NEMA-RATING; EXAMPLE SHOWN IS 30 AMPS, 3 POLES, NEMA 3R	

POWER DISTRIBUTION NOTES

1. ALL PANELBOARDS, BACKBOARDS, TERMINAL CABINETS, ETC SHALL HAVE CUSTOM ENGRAVED NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM. REFER TO EQUIPMENT LABELING DETAILS.
2. LOCATION OF DISCONNECT SWITCHES, ETC. FOR MECHANICAL EQUIPMENT/ROOM SHALL BE COORDINATED WITH FINAL MECHANICAL EQUIPMENT LOCATION TO PROVIDE NATIONAL ELECTRIC CODE REQUIRED ACCESS SPACE.
3. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FAULT CURRENT CALCULATIONS FOR THE SERVICE EQUIPMENT AND SHALL MARK THE EQUIPMENT WITH THE AVAILABLE FAULT CURRENT AND DATE OF THE CALCULATION PER NEC 110.24. REFER TO EQUIPMENT LABELING DETAILS.
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ARC FAULT LABELS PER NFPA 70E ARTICLE 110.16 FOR NEW EQUIPMENT. THE OWNER SHALL PROVIDE AVAILABLE CALCULATION DATA FOR THE EXISTING EQUIPMENT IN THE ELECTRICAL SYSTEM. REFER TO EQUIPMENT LABELING DETAILS.

RECEPTACLES

SYMBOL	DESCRIPTION	SPECIFICATION
	HOSPITAL GRADE DUPLEX RECEPTACLE; 125V; 20A; 2 POLE; 3 WIRE GND; NEMA 5-20R	HUBBELL SERIES HBL8300
	HOSPITAL GRADE QUAD RECEPTACLE; 125V; 20A; 2 POLE; 3 WIRE GND; NEMA 5-20R	HUBBELL SERIES HBL8300
	HOSPITAL GRADE DUPLEX GFCI RECEPTACLE; 125V; 20A; 2 POLE; 3 WIRE GND; NEMA 5-20R	HUBBELL SERIES GFTRST83
X	SPECIAL PURPOSE RECEPTACLE. "X" INDICATES DEVICE TYPE. DEVICE TYPE: A = 125V, 20A, 3W, NEMA 5-20R B = 480V, 200A, 5W, NON-NEMA	A = HUBBELL SERIES HBL8300RMRI B = RUSSELLSTOLL DF2504FRABØ
DESIGNATION	**DESCRIPTION**	**SPECIFICATION**
+XX	MOUNTING HEIGHT INDICATION FOR OTHER THAN 18" AFF TO C/L. +XX" SHALL INDICATED MOUNTING INCHES ABOVE FINISHED FLOOR TO CENTER LINE. MOUNTING HEIGHT SHALL BE FIELD COORDINATED FOR THE FOLLOWING: +AC" = ABOVE COUNTER. +DF" = DRINKING FOUNTAIN +TV" = TELEVISION +DW" = DISHWASHER RECEPTACLE	
IG	"IG" INDICATES ISOLATED GROUND DEVICE	
WP	"WP" INDICATES WEATHER PROOF DEVICE AND WEATHER PROOF IN-USE COVER.	COVER: PASS AND SEYMOUR WIUFC10S

RECEPTACLE NOTES

1. ANY RECEPTACLE LOCATED IN WET ENVIRONMENT PROVIDE THE EQUIVALENT WP VERSION OF RECEPTACLE.
2. RECEPTACLES, SWITCHES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.
3. VERIFY EXACT LOCATION OF ALL FLOOR OUTLETS WITH THE ARCHITECT PRIOR TO ROUGHING-IN.
4. MOUNT RECEPTACLES 18" AFF TO C/L UNLESS NOTED OTHERWISE.

TELECOMMUNICATIONS

SYMBOL	DESCRIPTION	SPECIFICATION
	DATA OUTLET; PROVIDE 3/4"C WITH PULLSTRING FROM FROM WALL BOX TO ACCESSIBLE CEILING.	JUNCTION BOX & CONDUIT BY EC; DATA DEVICES AND COVERPLATES BY TELECOM CONTRACTOR.
	TELEPHONE OUTLET; PROVIDE 3/4"C WITH PULLSTRING FROM FROM WALL BOX TO ACCESSIBLE CEILING.	JUNCTION BOX & CONDUIT BY EC; DATA DEVICES AND COVERPLATES BY TELECOM CONTRACTOR.

TELECOMMUNICATIONS NOTES

1. MOUNT DATA OUTLETS 18" AFF TO C/L UNLESS NOTED OTHERWISE.

RACEWAYS AND CONDUCTORS

SYMBOL	DESCRIPTION
	RACEWAY INSTALLED CONCEALED IN WALLS OR ABOVE CEILING
	RACEWAY INSTALLED EXPOSED
	RACEWAY INSTALLED IN SLAB / BELOW GRADE / UNDER FLOOR
	EMERGENCY / LIFE SAFETY POWER CIRCUIT
	LOW VOLTAGE CONDUCTOR
P-1,3,5	HOMERUN ARROW WITH CIRCUIT TAG. CIRCUIT TAG INDICATES PANEL-SPACE,SPACE,SPACE. TAG SHOWN INDICATES PANEL "P" WITH 3 POLE CIRCUIT TO SPACES 1, 3, AND 5
	WIRE COUNT TICK MARKS. EACH TICK MARK INDICATES ONE CONDUCTOR IN RACEWAY. TICK MARK WITH DOT REPRESENTS EQUIPMENT GROUND. NO TICK MARK INDICATES 2 CONDUCTORS PLUS EQUIPMENT GROUND.
	ANNOTATIVE BREAK IN WIRE INDICATES CIRCUIT CONTINUES BEYOND WHAT IS SHOWN
	FLEXIBLE CONDUIT CONNECTION

(_) #_ & #_ - "C

- TOTAL NUMBER OF RUNS. SEE NOTE 1.
- TOTAL NUMBER OF CONDUCTORS PER RUN
- SIZE OF CONDUCTORS AWG OR KCMIL
- TRADE SIZE OF CONDUIT
- SIZE OF GROUNDING CONDUCTOR
- NUMBER GROUNDING CONDUCTORS. SHOULD ALWAYS BE 1.

NOTES
1. ONLY INDICATED IF MORE THAN ONE.
2. SEE FEEDER SCHEDULE
3. NO WIRE SIZE NOTED INDICATES 2#12 & 1#12 - 3/4"C.

EXAMPLE

2#10 & 1#10 - 3/4"C
- ONE RUN OF 3/4" CONDUIT CONTAINING TWO #10AWG AND ONE #10AWG GROUNDING CONDUCTOR.

(2)4#3/0 & 1#3 - 2"C
- TWO RUNS OF 2" CONDUIT WITH EACH CONDUIT CONTAINING FOUR #3/0AWG AND ONE #3/0AWG GROUNDING WIRE.

WIRING NOTES

1. ALL EXPOSED CONDUITS, BOXES, STRAPS AND HANGERS IN THE CONTRACT AREA WHETHER NEW OR EXISTING THAT ARE PART OF THE ELECTRICAL SYSTEM SHALL BE PAINTED TO MATCH ADJACENT FINISH.
2. FINAL CONNECTION TO ALL MOTORS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION.
4. PROVIDE BUSHINGS ON ALL CONDUIT.
5. PROVIDE GREEN GROUND CONDUCTOR IN ALL CIRCUITS - SIZE PER N.E.C.

FIRE ALARM

SYMBOL	DESCRIPTION	SPECIFICATION
FACP	FIRE ALARM CONTROL PANEL / REMOTE ANNUNCIATOR PANEL AS INDICATED; SURFACE MOUNT.	EXISTING SILENT KNIGHT MODEL 5204 FIRE ALARM SYSTEM.
F	MANUAL PULL STATION.	DEVICE COMPATIBLE WITH EXISTING SYSTEM.
H	WALL MOUNT SIGNAL HORN/STROBE.	DEVICE COMPATIBLE WITH EXISTING SYSTEM.
	WALL MOUNT STROBE.	DEVICE COMPATIBLE WITH EXISTING SYSTEM.
D	CEILING MOUNT AUTOMATIC HEAT DETECTOR; 135 DEGREE RATE OF RISE.	DEVICE COMPATIBLE WITH EXISTING SYSTEM.
	AUTOMATIC AIR DUCT SMOKE DETECTOR; MOUNTING COORDINATED WITH MECHANICAL.	DEVICE COMPATIBLE WITH EXISTING SYSTEM.
DESIGNATION	**DESCRIPTION**	**SPECIFICATION**
110H	FOR SIGNAL STROBE DEVICES 110 INDICATES 110 CANDELA RATING; NO INDICATION 75 CANDELA.	DEVICE COMPATIBLE WITH EXISTING SYSTEM.

FIRE ALARM NOTES

1. ALL MANUAL PULL STATIONS SHALL BE MOUNTED 48" AFF TO C/L; ALL WALL MOUNTED SIGNAL DEVICES SHALL BE LOCATED 80" AFF TO BOTTOM OF DEVICE, BUT NOT LESS THAN 6" FROM CEILING.
2. FOR SIGNAL DEVICES, STROBE CANDELA AND AUDIO SIGNAL SHALL BE SELECTABLE ON THE BACK OF THE DEVICE.
3. FIRE ALARM LOW VOLTAGE SOURCE AND BATTERY STANDBY SHALL ENERGIZE ALL ITEMS IN FIRE ALARM SYSTEM THAT REQUIRE POWER.

LIGHTING FIXTURES

SYMBOL	DESCRIPTION	SPECIFICATION
	CEILING MOUNTED FIXTURE; DRAWN TO SCALE	SEE LIGHTING FIXTURE SCHEDULE
	WALL MOUNTED FIXTURE	SEE LIGHTING FIXTURE SCHEDULE
	CEILING MOUNTED FIXTURE	SEE LIGHTING FIXTURE SCHEDULE
	EXIT SIGN; WALL MOUNTED; SHADED REGION INDICATES ILLUMINATED FACE; ARROW INDICATES DIRECTIONAL ARROW	SEE LIGHTING FIXTURE SCHEDULE
DESIGNATION	**DESCRIPTION**	**SPECIFICATION**
DL a	"DL" REPRESENTS FIXTURE IDENTIFIER. LOWERCASE LETTER "a" INDICATES SWITCHING ZONE.	REFER TO LIGHTING FIXTURE SCHEDULE. REFER TO LIGHTING CONTROLS MATRIX / SEQUENCE OF OPERATIONS.
	SHADED CENTER OF FIXTURE REPRESENTS FIXTURE FOR EMERGENCY EGRESS LIGHTING.	REFER TO LIGHTING FIXTURE SCHEDULE. REFER TO LIGHTING CONTROL DETAILS.

LIGHTING FIXTURE NOTES

1. LIGHTING FIXTURE SYMBOLS REPRESENT THE GENERAL SIZE AND SHAPE OF THE FIXTURE, BUT ARE NOT MEANT TO BE TO-SCALE REPRESENTATIONS UNLESS NOTED OTHERWISE. THE SYMBOLS LISTED IN THE ABOVE LEGEND ARE TYPICAL BUT MAY NOT REPRESENT ALL SYMBOLS SHOWN ON THE PLANS. REFER TO THE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.
2. LOCATION OF LIGHTING FIXTURES IN MECHANICAL EQUIPMENT ROOM SHALL BE COORDINATED WITH THE FINAL MECHANICAL EQUIPMENT LOCATION INCLUDING AC EQUIPMENT, PUMPS, DUCTWORK, PIPE, ETC. TO PROVIDE NEC REQUIRED ACCESS SPACE AND PROPER ILLUMINATION.
3. ALL EXIT SIGNS AND FIXTURES WITH INTEGRAL BATTERY BACKUP SHALL BE CONNECTED TO THE LIGHT CIRCUIT AHEAD OF LOCAL SWITCH CONTROL.

LIGHTING CONTROLS

SYMBOL	DESCRIPTION	SPECIFICATION
RC	LIGHTING CONTROLS ROOM CONTROLLER. INSTALL CONCEALED ABOVE ACCESSIBLE CEILING UNLESS NOTED OTHERWISE.	WATTSTOPPER LMRC-111, OR EQUIVALENT. SEE DETAILS.
OS	LIGHTING CONTROLS MOTION SENSOR; CEILING MOUNTED; PROGRAMMED FOR OCCUPANCY SENSING.	WATTSTOPPER LMDC-100, SEE DETAILS.
$LX	LOW VOLTAGE SWITCH. "X" INDICATES BUTTON COUNT.	WATTSTOPPER LMSW-SERIES. SEE DETAILS.
$	SINGLE POLE TOGGLE SWITCH	HUBBELL SERIES HBL1221
$3	3-WAY TOGGLE SWICH	HUBBELL SERIES HBL1223
$4	4-WAY TOGGLE SWITCH	HUBBELL SERIES HBL1224
$OS	WALL SWITCH WITH MOTION SENSOR; PROGRAM FOR OCCUPANCY SENSING.	WATTSTOPPER #DWS-301-W

LIGHTING CONTROL NOTES

1. REFER TO LIGHTING CONTROL MATRIX / SEQUENCE OF OPERATIONS TABLE FOR PROGRAMMING OF LIGHTING CONTROLS.
2. REFER TO LIGHTING CONTROL DETAILS FOR TYPICAL WIRING OF CONTROLS, LOW VOLTAGE NETWORKING OF CONTROLS, AND BASIS OF DESIGN EQUIPMENT SPECIFICATIONS.
3. ALL LIGHTING CONTROL SWITCHES SHALL BE MOUNTED 48" AFF TO C/L UNLESS NOTED OTHERWISE.

POWER DEVICES

SYMBOL	DESCRIPTION	SPECIFICATION
	JUNCTION BOX WALL MOUNTED	THOMAS & BETTS 52171, OR EQUAL.
	JUNCTION BOX ABOVE CEILING	THOMAS & BETTS 52171, OR EQUAL.
	RED MUSHROOM EMERGENCY STOP; MAINTAINED PUSH AND KEY RELEASE; LABEL 'EMERGENCY STOP'	SQUARE D MODEL XB6AS9345B. SEE DETAILS.
$2P	2 POLE, 600V, 30A TOGGLE DISCONNECT SWITCH WITH LOCKABLE ENCLOSURE	HUBBELL BRYANT 30102D
DESIGNATION	**DESCRIPTION**	**SPECIFICATION**
"XX"	"XX" INDICATES TYPE OF EQUIPMENT TO BE POWERED. EQUIPMENT TYPES: DDC = HVAC CONTROL PANEL, DDC ACP = ACCESS CONTROL PANEL AV = AUDIO VISUAL EQUIPMENT POWER	

POWER DEVICE NOTES

1. FOR TOGGLE SWITCH USED AS EQUIPMENT DISCONNECT, ELECTRICAL PLANS INDICATING DEVICES MOUNTED TO EQUIPMENT IS DIAGRAMMATIC ONLY AND THE FINAL LOCATION OF DEVICES SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR. COORDINATE DEVICE MOUNTED TO EQUIPMENT SPECIFIED AND PROVIDED UNDER OTHER SECTIONS WITH INSTALLING CONTRACTOR AND THE SPECIFYING ENGINEER.

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REVISIONS:

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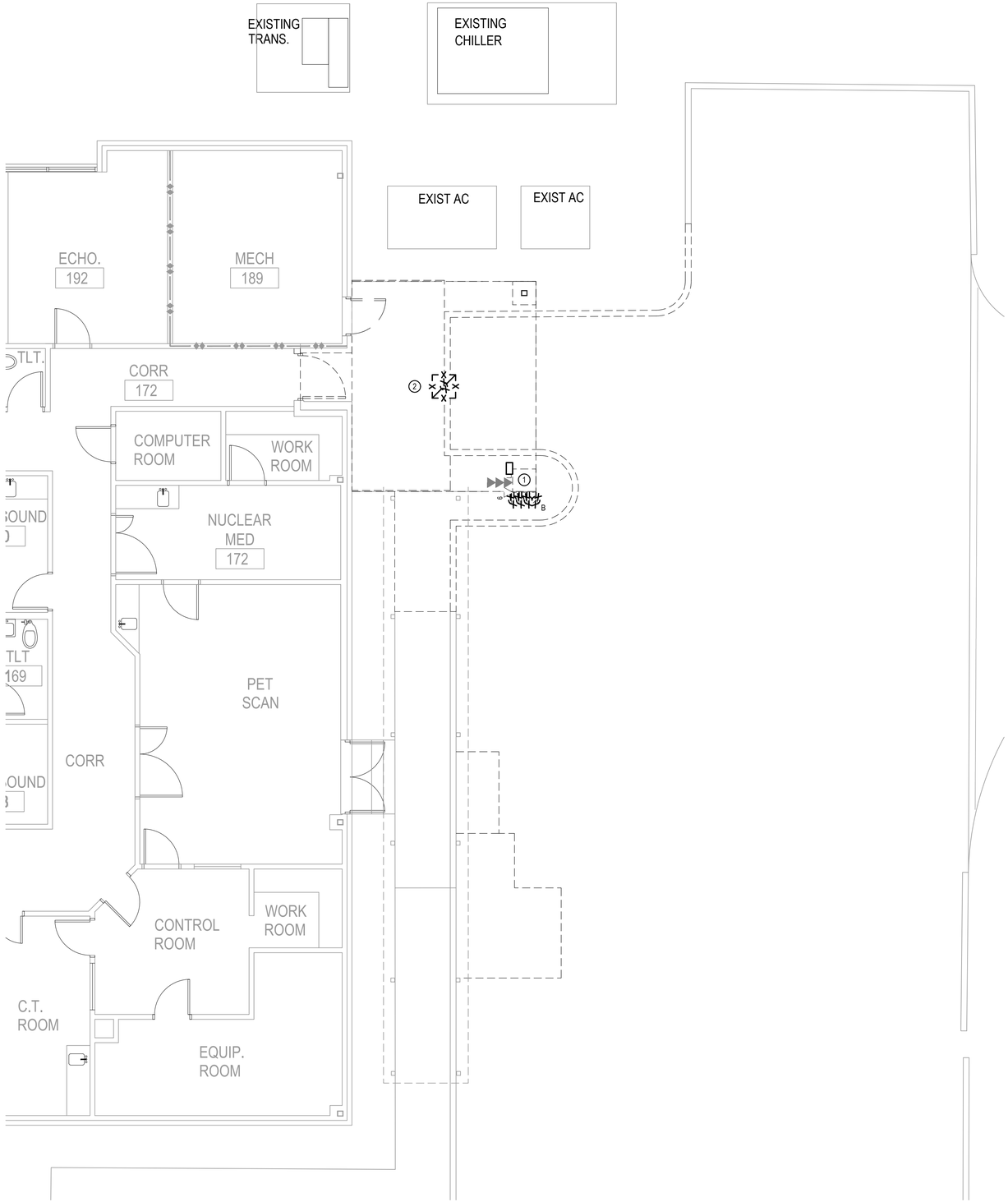
24110 Job No.

PROJECT NUMBER	24107
DATED	03/28/2025

E-002

22017
CONSTRUCTION DWGS
2025-04-04



KEYNOTES

1. EXISTING MOBILE MRI RECEPTACLE AND ASSOCIATED ELECTRICAL AND DATA OUTLETS SHALL BE RELOCATED OUT OF THE FOOTPRINT OF THE NEW CONSTRUCTION. PRESERVE EXISTING DISCONNECT AND MRI RECEPTACLE; ALL OTHER OUTLETS ARE TO BE DEMOLISHED AND REPLACED. EXISTING CONDUITS SHALL BE TRACED BACK TO WHERE THEY EXIT THE BUILDING, INTERCEPTED, AND EXTENDED TO NEW LOCATION. REFER TO NEW CONSTRUCTION DRAWINGS FOR ADDITIONAL DETAILS.
2. DEMOLISH EXISTING CANOPY FIXTURE. REMOVE EXISTING CONDUIT AND CIRCUITRY BACK TO NEAREST JUNCTION BOX WITHIN EXISTING BUILDING.

NORTH

E-101 | FLOOR PLAN - DEMO
SCALE: 3/16" = 1'-0"

1 2 3 4 5

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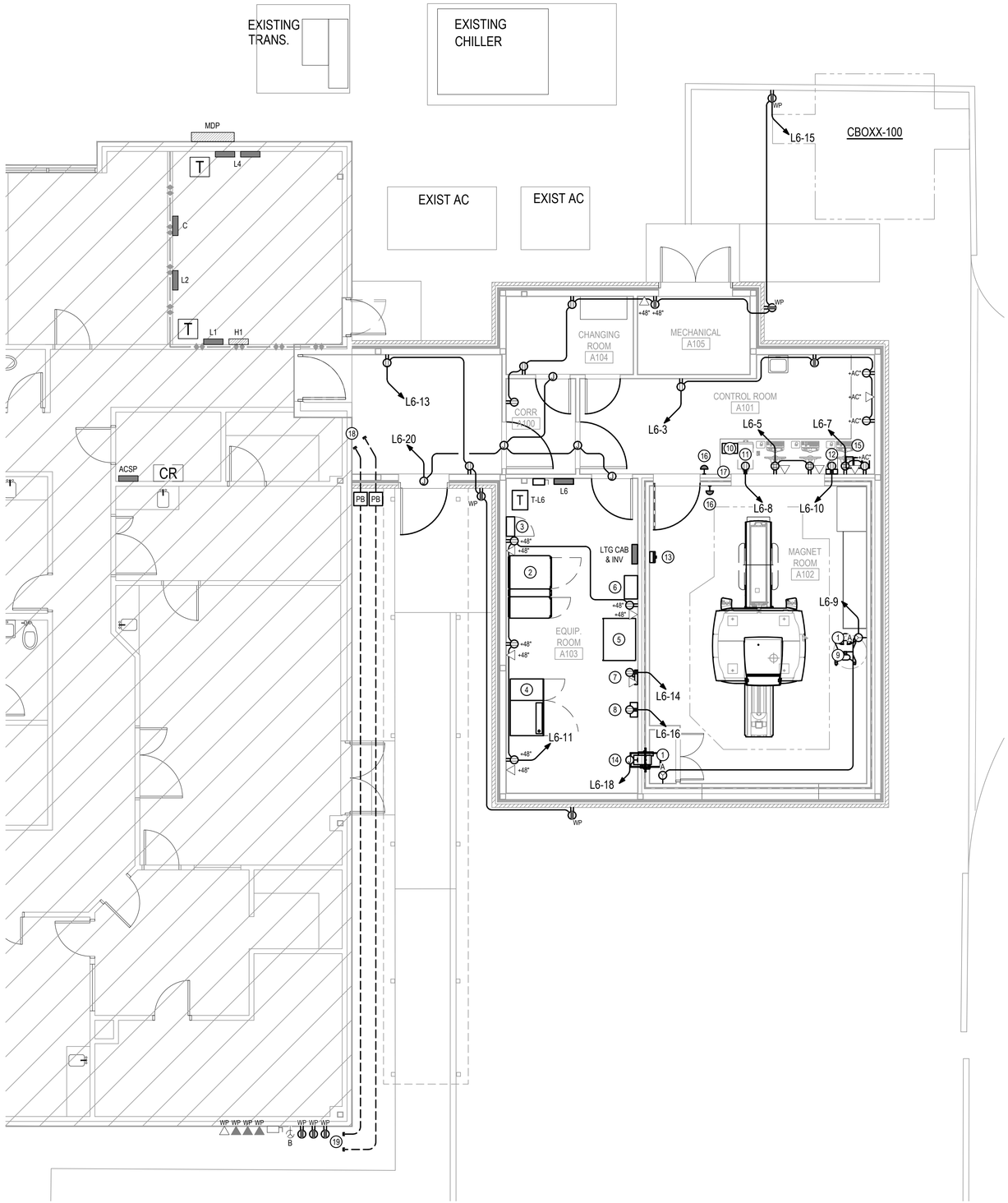
E-101



NORTH

GENERAL NOTES

1. COORDINATE ALL INSTALLATIONS WITHIN MAGNET ROOM WITH RF SHIELDING INSTALLER. ENSURE NECESSARY FILTERS AND NON-FERROUS CONSTRUCTION IS UTILIZED. PROVIDE LEAD SHEATHING FOR ANY ELECTRICAL INSTALLATION WITHIN RF SHIELDED WALLS AND ELSEWHERE DEEMED NECESSARY.
2. COORDINATE ALL INSTALLATION WITH GE HEALTHCARE DRAWINGS TO INCLUDE ANY ADDITIONAL REQUIREMENTS OUTLINED IN THOSE DOCUMENTS THAT HAVE OTHERWISE NOT BEEN CAPTURED WITHIN THESE SHEETS.
3. UNLESS OTHERWISE NOTED, THE EC SHALL PROVIDE ALL NECESSARY CONDUIT AND/OR CABLE TRAY BETWEEN PIECES OF GE HEALTHCARE EQUIPMENT REGARDLESS OF THE EQUIPMENT INSTALLER. THE EC SHALL ALSO PROVIDE THE NECESSARY POWER AND/OR CONTROL CABLING WHERE INDICATED BY GE HEALTHCARE.

KEYNOTES

1. CONVENIENCE OUTLET IN MAGNET ROOM MUST BE FOR SERVICE ONLY PER AHCA REQUIREMENTS. PROVIDE PERMANENT RED ENGRAVED LABEL WITH WHITE LETTERING STATING "FOR SERVICE ONLY." PROVIDE ETS-LINDGREN LRE-2030 POWER FILTER, OR EQUIVALENT, FOR CIRCUIT PRIOR TO ENTERING RF SHIELD. ENSURE NON-FERROUS MATERIALS ARE UTILIZED WITHIN MAGNET ROOM AND PROVIDE LEAD LINING FOR ANY ELECTRICAL INSTALLATION WITHIN RF SHIELDING WALL.
2. EATON 93PM UNINTERRUPTIBLE POWER SUPPLY SUPPLIED BY GEHC AND INSTALLED BY EC.
3. MRI MAIN DISCONNECT PANEL (MDP) SUPPLIED BY GEHC AND INSTALLED BY EC. REFER TO THE RISER AND DETAILS FOR ADDITIONAL INFORMATION AND INTERCONNECTIONS.
4. POWER, GRADIENT, RF CABINET (PGR) SUPPLIED AND INSTALLED BY GEHC. REFER TO THE RISER AND DETAILS FOR ADDITIONAL INFORMATION AND INTERCONNECTIONS.
5. INTEGRATED COOLING CABINET (ICC) SUPPLIED AND INSTALLED BY GEHC. REFER TO THE RISER AND DETAILS FOR ADDITIONAL INFORMATION AND INTERCONNECTIONS.
6. CHILLER INTERFACE PANEL (CIP) TO BE SUPPLIED BY GEHC AND INSTALLED BY MECHANICAL CONTRACTOR. NO ELECTRICAL CONNECTION REQUIRED.
7. MAGNET MONITOR (MON) SUPPLIED AND INSTALLED BY GEHC. INTERCONNECT WITH MRI MAGNET, PGR, AND ICC THROUGH GEHC SUPPLIED CABLING. ROUTE MAGNET ROOM CABLING THROUGH PENETRATION PANEL. MOUNT POWER OUTLET AT HEIGHT RECOMMENDED BY MANUFACTURER. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
8. INJECTOR POWER SUPPLY (IPS) SUPPLIED BY BAYER. INTERCONNECT WITH INJECTOR HEAD THROUGH MANUFACTURER RECOMMENDED CABLING. ROUTE MAGNET ROOM CABLING THROUGH BAYER PENETRATION PANEL. CONFIRM CIRCUIT REQUIREMENTS PRIOR TO ROUGH-IN. COORDINATE WITH BAYER SHOP DRAWINGS FOR ADDITIONAL INFORMATION.
9. INJECTOR HEAD ON PEDESTAL (IHP) SUPPLIED BY BAYER. INTERCONNECT WITH INJECTOR POWER SUPPLY AND INJECTOR CONTROL THROUGH MANUFACTURER RECOMMENDED CABLING. ROUTE MAGNET ROOM CABLING THROUGH BAYER PENETRATION PANEL. COORDINATE WITH BAYER SHOP DRAWINGS FOR ADDITIONAL INFORMATION.
10. INJECTOR CONTROLLER (IC) SUPPLIED BY BAYER. INTERCONNECT WITH INJECTOR HEAD ON PEDESTAL IN MAGNET ROOM VIA MANUFACTURER RECOMMENDED CABLING. ROUTE MAGNET ROOM CABLING THROUGH BAYER PENETRATION PANEL. COORDINATE WITH BAYER SHOP DRAWINGS FOR ADDITIONAL INFORMATION.
11. GLOBAL OPERATOR CONSOLE (GOC) SUPPLIED AND INSTALLED BY GEHC. INTERCONNECT WITH MRI MAGNET AND PGR THROUGH GEHC SUPPLIED CABLING. ROUTE MAGNET ROOM CABLING THROUGH PENETRATION PANEL.
12. REMOTE CONTROL PANEL (RCP) SUPPLIED BY GEHC AND INSTALLED BY EC. PROVIDE ONE (1) 1" CONDUIT WITH MANUFACTURER RECOMMENDED CABLING TO NEW CBOXX-100 CHILLER.
13. MAGNET RUNDOWN UNIT (MRU) SUPPLIED AND INSTALLED BY GEHC. INTERCONNECT WITH MRI MAGNET VIA GEHC SUPPLIED CABLING.
14. PENETRATION PANEL (PP) SUPPLIED AND INSTALLED BY GEHC. REFER DETAILS FOR ADDITIONAL INFORMATION AND INTERCONNECTIONS.
15. MUSIC SYSTEM (MS) SUPPLIED AND INSTALLED BY GEHC. INTERCONNECT WITH WITH MRI MAGNET THROUGH GEHC SUPPLIED CABLING. ROUTE MAGNET ROOM CABLING THROUGH PENETRATION PANEL. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
16. EMERGENCY OFF BUTTON SUPPLIED BY GEHC AND INSTALLED BY EC. INTERCONNECT WITH MRI MDP FOR REMOVAL OF ALL POWER UPON ACTIVATION. ROUTE MAGNET ROOM CABLING THROUGH PENETRATION PANEL. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
17. PROVIDE ONE (1) 2" AND ONE (1) 3" CONDUITS WITH PULLSTRING FROM THE ENDPOINT OF THE EQUPMENT ROOM CABLE TRAY TO THIS LOCATION. CONDUITS SHALL NOT PENETRATE THE RF SHIELD. TERMINATE CONDUITS AT A JUNCTION BOX ABOVE THE CEILING. PROVIDE SURFACE MOUNT WALL DUCT WITH TWO (2) DIVIDERS (6" x 3-1/2") DOWN FROM THE JUNCTION BOX TO THE GROMMETED OPENING OF THE OPERATORS CONSOLE. REFER TO GEHC DRAWINGS FOR ADDITIONAL DETAILS, INCLUDING CONDUIT ROUTING.
18. RELOCATE EXISTING MRI RECEPTACLE AND 200A DISCONNECT TO THIS LOCATION. PROVIDE NEW DEVICES AS SHOWN. ALL DEVICES SHALL BE MOUNTED AT APPROXIMATELY THE SAME HEIGHT AS THEY PREVIOUSLY WERE.
19. APPROXIMATE LOCATION TO INTERCEPT EXISTING CONDUITS TO MOBILE MRI RECEPTACLE AND ASSOCIATED DEVICES. PROVIDE ONE PULLBOX FOR POWER AND ANOTHER FOR DATA. EXTEND TO NEW LOCATION AS SHOWN. EC TO FIELD VERIFY EXISTING CONDITIONS TO DETERMINE TOTAL NUMBER OF CONDUITS, CIRCUITS, AND SIZE OR WIRE.

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Gulf Coast Hospital

REVISIONS:

No.	Description	Date

FLOOR PLAN - POWER

PROJECT NUMBER	24107
DATED	03/28/2025

E-201

E-201 | FLOOR PLAN - POWER
SCALE: 3/16" = 1'-0"

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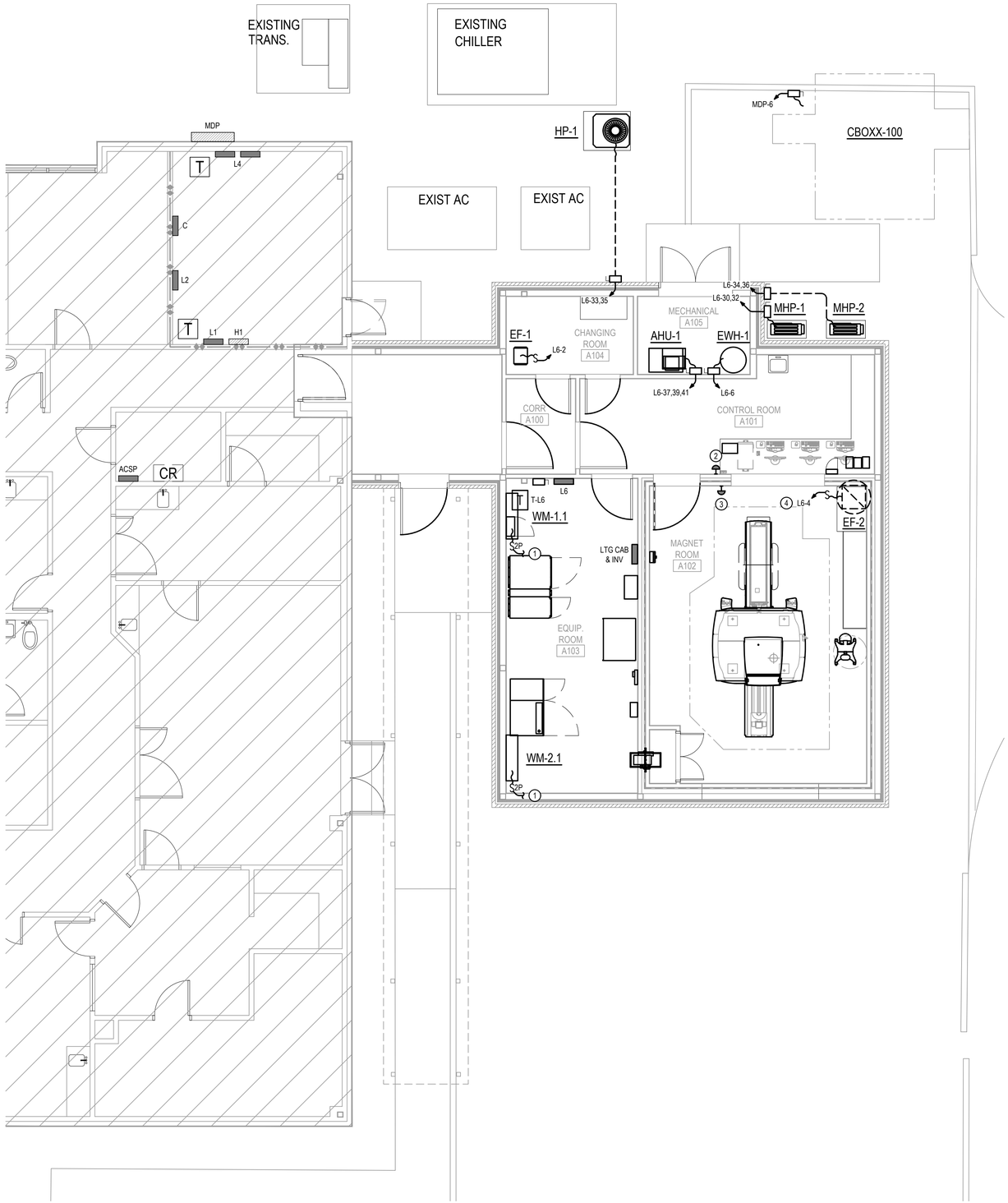
24110 Job No.

22017
CONSTRUCTION DWGS
2025-04-04



GENERAL NOTES

1. COORDINATE ALL INSTALLATIONS WITHIN MAGNET ROOM WITH RF SHIELDING INSTALLER. ENSURE NECESSARY FILTERS AND NON-FERROUS CONSTRUCTION IS UTILIZED. PROVIDE LEAD SHEATHING FOR ANY ELECTRICAL INSTALLATION WITHIN RF SHIELDED WALLS AND ELSEWHERE DEEMED NECESSARY.
2. COORDINATE ALL INSTALLATION WITH GE HEALTHCARE DRAWINGS TO INCLUDE ANY ADDITIONAL REQUIREMENTS OUTLINED IN THOSE DOCUMENTS THAT HAVE OTHERWISE NOT BEEN CAPTURED WITHIN THESE SHEETS.
3. UNLESS OTHERWISE NOTED, THE EC SHALL PROVIDE ALL NECESSARY CONDUIT AND/OR CABLE TRAY BETWEEN PIECES OF GE HEALTHCARE EQUIPMENT REGARDLESS OF THE EQUIPMENT INSTALLER. THE EC SHALL ALSO PROVIDE THE NECESSARY POWER AND/OR CONTROL CABLING WHERE INDICATED BY GE HEALTHCARE.

KEYNOTES

1. INDOOR UNIT TO RECEIVE POWER FROM RESPECTIVE OUTDOOR UNIT.
2. INTERLOCK PUSH BUTTON WITH EXHAUST FAN EF-2 FOR ACTIVATION UPON PRESS. PROVIDE PILLA ST120SL WITH "EMERGENCY VENTILATION START" LABEL AND PILCHOV1 CLEAR COVER. BUTTON SHALL OPERATE IN PARALLEL WITH MAGNET ROOM BUTTON; PROVIDE ANY ADDITIONAL SETS ON CONTACTS, AS NEEDED.
3. INTERLOCK PUSH BUTTON WITH EXHAUST FAN EF-2 FOR ACTIVATION UPON PRESS. PROVIDE NON-FERROUS PUSH BUTTON EQUAL TO PILLA ST120SL WITH "EMERGENCY VENTILATION START" LABEL AND PILCHOV1 CLEAR COVER. BUTTON SHALL OPERATE IN PARALLEL WITH CONTROL ROOM BUTTON; PROVIDE ANY ADDITIONAL SETS ON CONTACTS, AS NEEDED.
4. PROVIDE ETS-LINDGREN LRE-2030 POWER FILTER, OR EQUIVALENT, FOR CIRCUIT PRIOR TO ENTERING RF SHIELD. ENSURE NON-FERROUS MATERIALS ARE UTILIZED WITH MAGNET ROOM.

E-301 | FLOOR PLAN - MECH POWER
SCALE: 3/16" = 1'-0"

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Gulf Coast Hospital

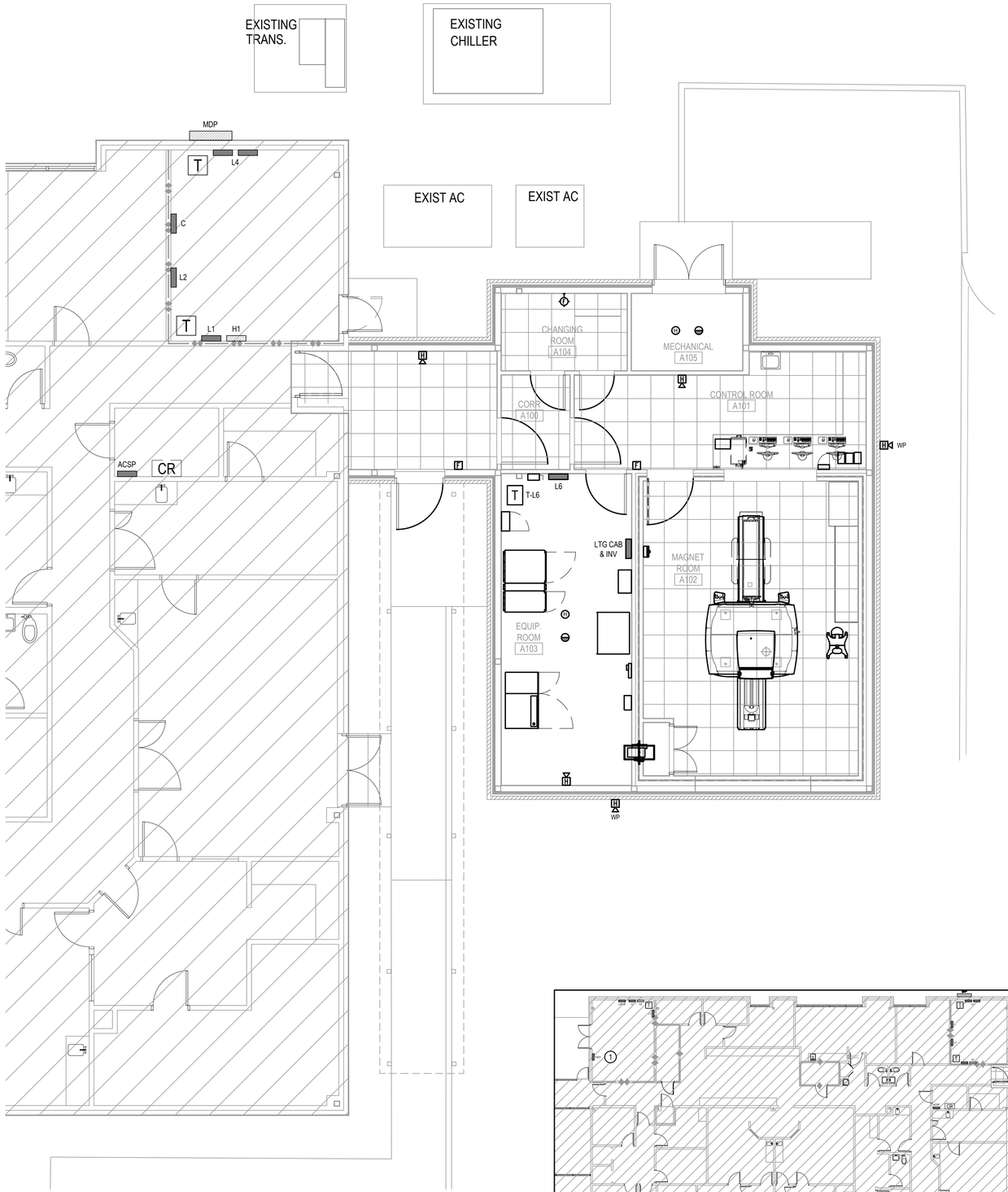
REVISIONS:

No.	Description	Date

FLOOR PLAN - MECH POWER

PROJECT NUMBER	24107
DATED	03/28/2025

E-301



NORTH

E-401 | FLOOR PLAN - FIRE ALARM

SCALE: 3/16" = 1'-0"

E-401 | FLOOR PLAN - FIRE ALARM KEY PLAN

SCALE: 1/16" = 1'-0"

GENERAL NOTES

1. COORDINATE ALL INSTALLATIONS WITHIN MAGNET ROOM WITH RF SHIELDING INSTALLER. ENSURE NECESSARY FILTERS AND NON-FERROUS CONSTRUCTION IS UTILIZED. PROVIDE LEAD SHEATHING FOR ANY ELECTRICAL INSTALLATION WITHIN RF SHIELDED WALLS AND ELSEWHERE DEEMED NECESSARY.
2. COORDINATE ALL INSTALLATION WITH GE HEALTHCARE DRAWINGS TO INCLUDE ANY ADDITIONAL REQUIREMENTS OUTLINED IN THOSE DOCUMENTS THAT HAVE OTHERWISE NOT BEEN CAPTURED WITHIN THESE SHEETS.
3. UNLESS OTHERWISE NOTED, THE EC SHALL PROVIDE ALL NECESSARY CONDUIT AND/OR CABLE TRAY BETWEEN PIECES OF GE HEALTHCARE EQUIPMENT REGARDLESS OF THE EQUIPMENT INSTALLER. THE EC SHALL ALSO PROVIDE THE NECESSARY POWER AND/OR CONTROL CABLING WHERE INDICATED BY GE HEALTHCARE.

KEYNOTES

(1) LOCATION OF EXISTING FIRE-LITE MS-SUD-3 FIRE ALARM CONTROL PANEL (FACP). ENSURE ALL NEW DEVICES ARE COMPATIBLE WITH EXISTING SYSTEM.

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Gulf Coast Hospital

REVISIONS:

No.	Description	Date

FLOOR PLAN - FIRE ALARM

PROJECT NUMBER	24107
DATED	03/28/2025

E-401

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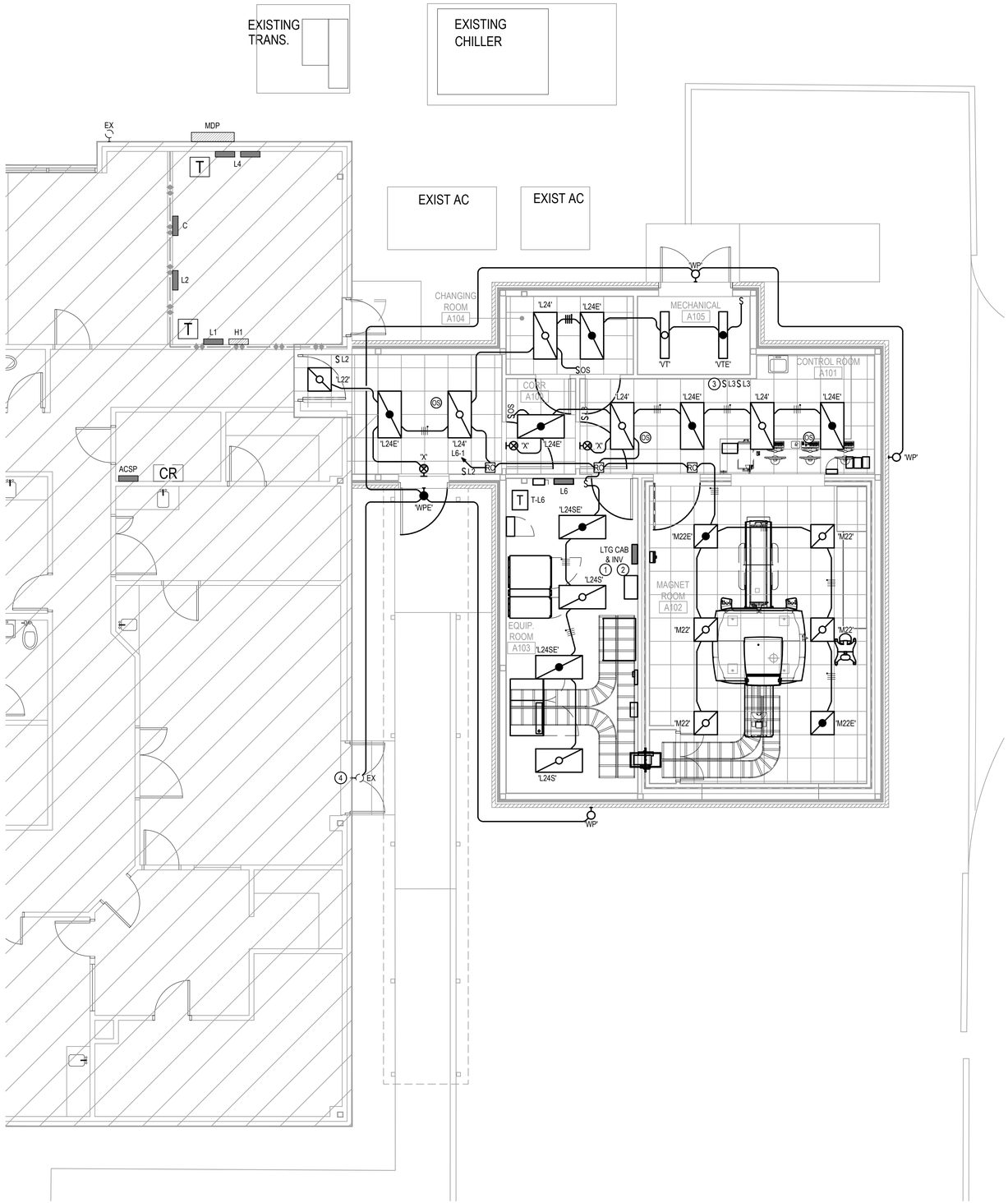

GENERAL NOTES

1. COORDINATE ALL INSTALLATIONS WITHIN MAGNET ROOM WITH RF SHIELDING INSTALLER. ENSURE NECESSARY FILTERS AND NON-FERROUS CONSTRUCTION IS UTILIZED. PROVIDE LEAD SHEATHING FOR ANY ELECTRICAL INSTALLATION WITHIN RF SHIELDED WALLS AND ELSEWHERE DEEMED NECESSARY.
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KEYNOTES

1. ALL DRIVERS FOR FIXTURES LOCATED IN THE MAGNET ROOM SHALL BE INSTALLED WITHIN THIS CABINET. ALL WIRING SHALL PASS THROUGH THE SPECIFIED KIRLIN RF FILTER PRIOR TO ENTERING THE MAGNET ROOM. REFER TO THE LIGHTING SCHEDULE FOR ADDITIONAL DETAILS.
2. LIGHTING INVERTER IS TO BE INSTALLED BENEATH DRIVER CABINET AND WIRED TO SUPPLY POWER TO THE DRIVERS CONTROLLING THE INDICATED FIXTURES. REFER TO THE LIGHTING SCHEDULE FOR ADDITIONAL INFORMATION.
4. ONE (1) SWITCH SHALL CONTROL THE LIGHTING IN THE OPERATOR'S ROOM WHILE THE OTHER SHALL CONTROL THE LIGHTING IN THE MAGNET ROOM. PROVIDE ETS-LINDGREN LTC-2640 SERIES RF FILTER PRIOR TO ENTERING THE MAGNET ROOM WITH ANY CONTROL CABLES.
5. TIE NEW WALLPACKS INTO EXISTING EXTERIOR LIGHTING CIRCUIT FOR POWER AND CONTROL.

NORTH

E-501 | FLOOR PLAN - LIGHTING
SCALE: 3/16" = 1'-0"

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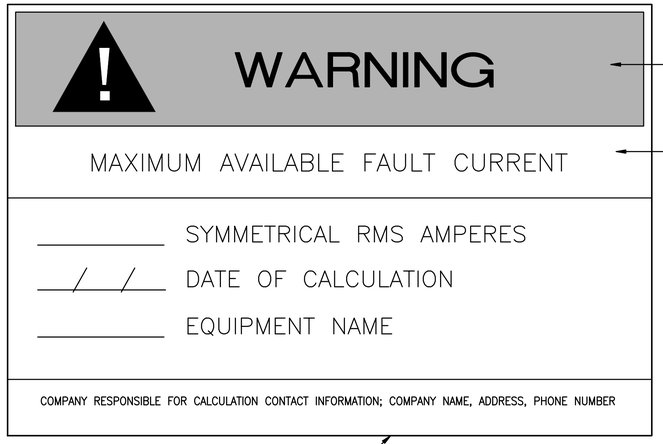
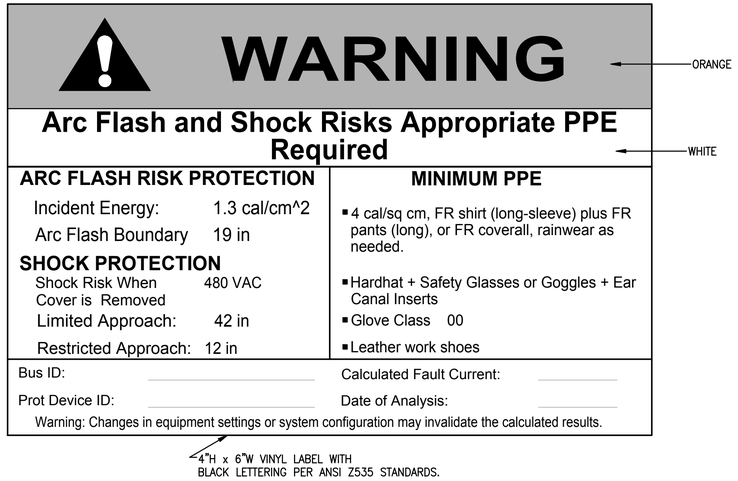
FLOOR PLAN - LIGHTING

PROJECT NUMBER	24107
DATED	03/28/2025

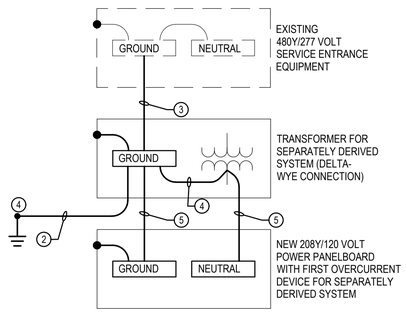
E-501



TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL
NOT TO SCALE



TYPICAL ARC FLASH HAZARD LABEL DETAIL
NOT TO SCALE



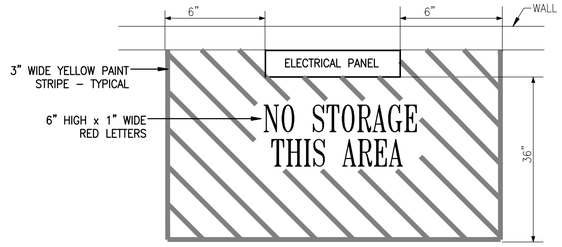
480Y/277V PARTIAL GROUNDING SYSTEM DIAGRAM
NTS

KEYNOTES

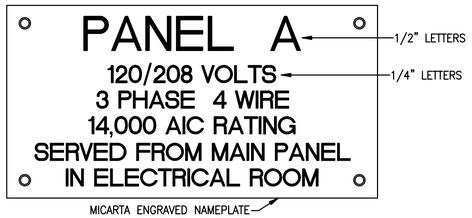
1. INSTALL GROUNDED (NEUTRAL) CONDUCTOR SAME SIZE AS THE LARGEST PHASE CONDUCTOR IF THE LINE-TO-NEUTRAL LOAD EXCEEDS 5% OF THE CONNECTED LOAD. IF NEUTRAL LOAD IS SMALLER, INSTALL THE NEC MINIMUM GROUNDED CONDUCTOR.
2. INSTALL GROUNDING ELECTRODE CONDUCTOR, SIZED BASED ON NEC TABLE 250-66 USING THE SERVICE PHASE CONDUCTOR SIZE, BUT NOT SMALLER THAN NO 4.
3. INSTALL EQUIPMENT GROUNDING CONDUCTOR SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER OVERCURRENT DEVICE SIZE.
4. CONNECT TO NEAREST METAL STRUCTURAL GROUNDING ELECTRODE OR COLD WATER PIPE GROUNDING ELECTRODE IN ACCORDANCE WITH ARTICLES 250.30(A) (8) AND 250.104(D)(1) OF THE 2014 N.E.C.
5. INSTALL SUPPLY SIDE BONDING JUMPER THAT IS SIZED BASED ON NEC TABLE 250.66 USING THE SEPARATELY DERIVED SYSTEM PHASE CONDUCTOR SIZE.

GENERAL NOTES

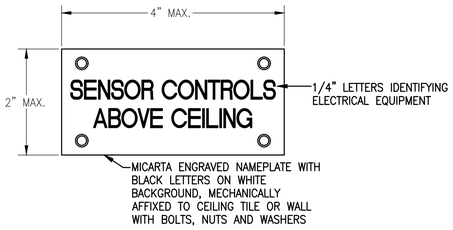
1. CONDUCTOR SIZES SHOWN ARE MINIMUM AND MAY BE LARGER THAN THE MINIMUM SIZES REQUIRED BY NEC.
2. INSTALL GROUNDING CONNECTIONS TO BUILDING STRUCTURE AND WATER PIPES AT LOCATIONS THAT ARE VISIBLE AND ACCESSIBLE FOR INSPECTION, MAINTENANCE, AND TESTING.
3. INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC FEEDER CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER CIRCUIT OVERCURRENT DEVICE SIZE OR THE SEPARATELY DERIVED SYSTEM OVERCURRENT DEVICE SIZE.



TYPICAL FLOOR MARKING AT ELECTRICAL PANELS
NOT TO SCALE



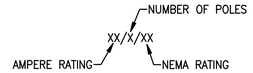
TYPICAL ELECTRICAL EQUIPMENT NAMEPLATE
NOT TO SCALE



TYPICAL ELECTRICAL EQUIPMENT ABOVE CEILING NAMEPLATE
NOT TO SCALE

LIGHTING FIXTURE NOMENCLATURE
NOT TO SCALE

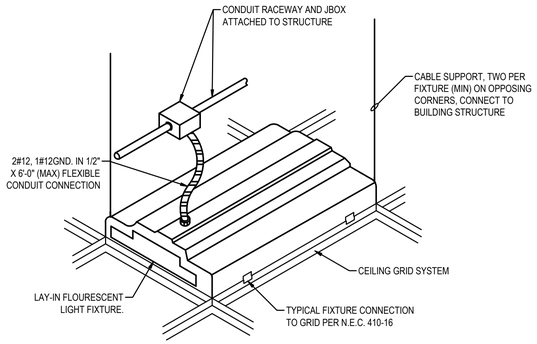
EXIT SIGN NOMENCLATURE
NOT TO SCALE



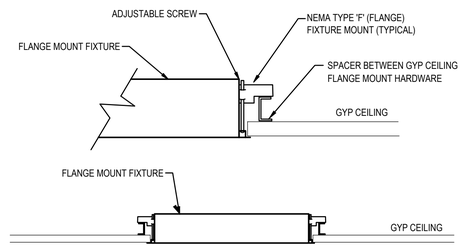
DISCONNECT SWITCH DESCRIPTION NOMENCLATURE

GENERAL NOTE
REFER TO MECHANICAL SCHEDULE FOR DISCONNECT, CONDUIT, AND WIRE SIZE.

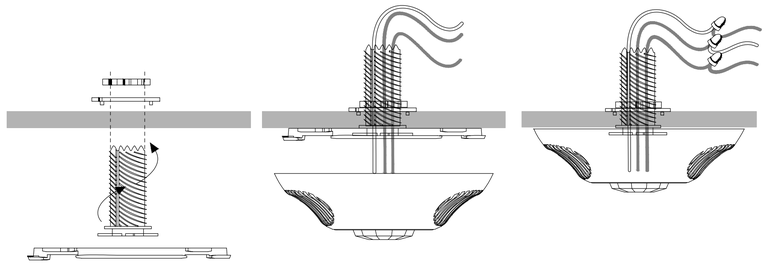
*** SPECIAL NOTE ***
PROVIDE 'LSI' TRIP UNITS FOR BREAKERS GREATER THAN OR EQUAL TO 200A.



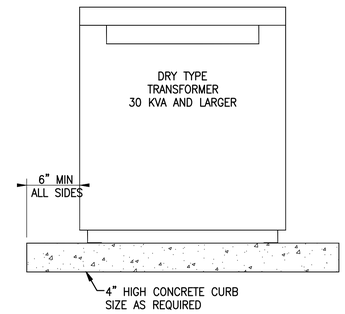
LAY-IN FIXTURE CABLE SUPPORT DETAIL
NOT TO SCALE



FLANGE MOUNT FIXTURE IN GYP BOARD CEILING
NOT TO SCALE



OCCUPANCY SENSOR MOUNTING DETAIL
NTS



30 KVA AND LARGER - FLOOR MOUNTED

TYPICAL DRY TYPE TRANSFORMER MOUNTING DETAIL
NOT TO SCALE

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BID DOCUMENTS

HCA FLORIDA GULF COAST HOSPITAL
Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

ELECTRICAL DETAILS

PROJECT NUMBER	24107
DATED	03/28/2025

E-601

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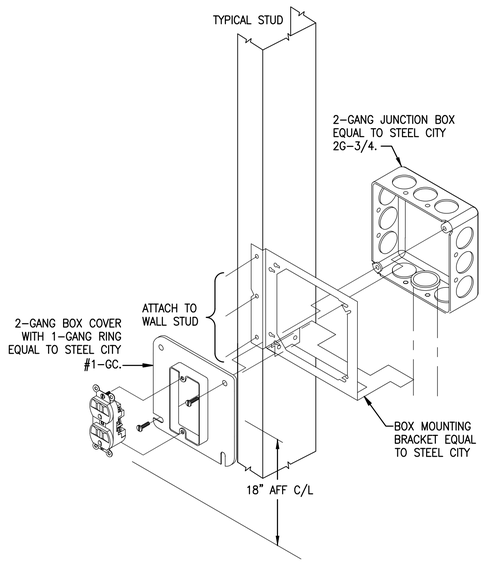
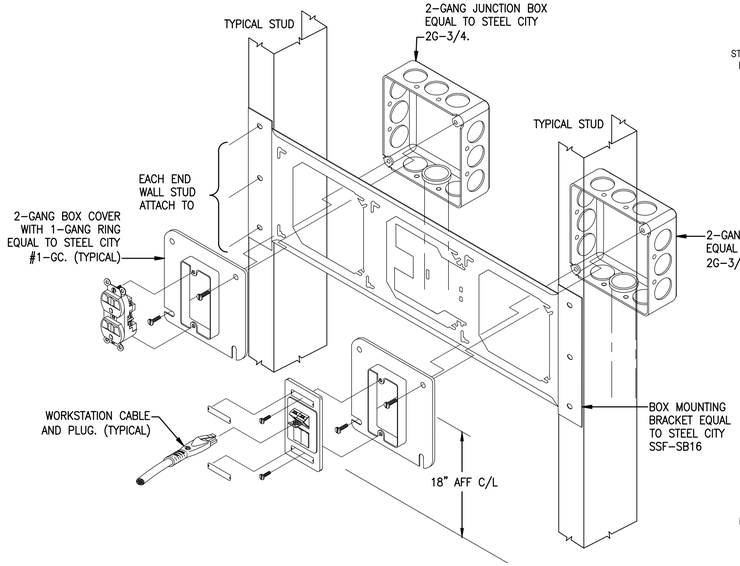
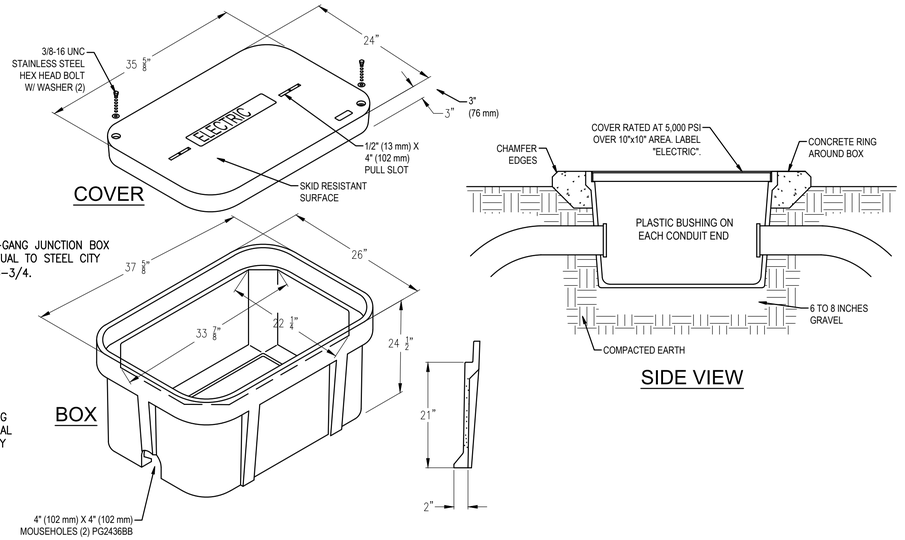
24110 Job No.



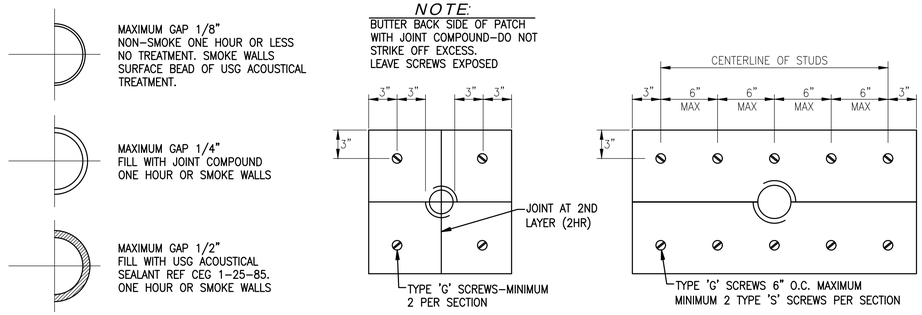
TYPICAL POWER ONLY
NTS



TYPICAL POWER & COMMUNICATIONS
NTS



TYPICAL PULLBOX DETAIL
NTS

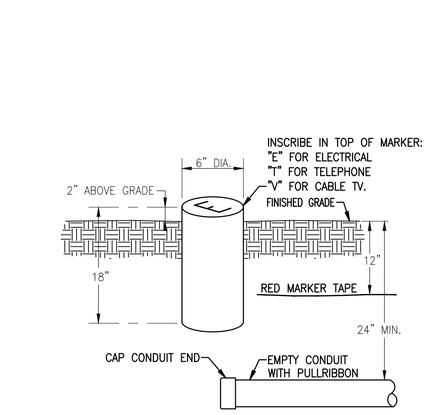


SMALL DIAMETER GAPS IN ONE HOUR WALLS

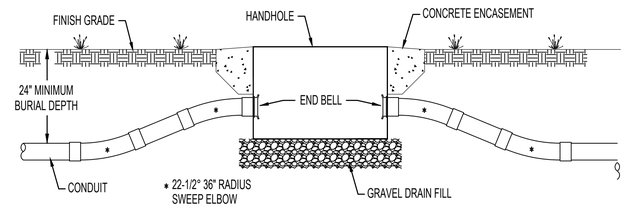
OPENINGS UP TO 3" DIA.

OPENINGS OVER 3" DIA.

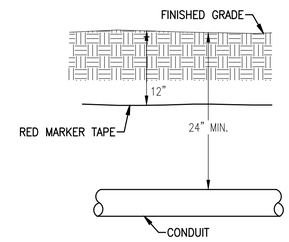
WALL PENETRATIONS –APPLIES TO ALL CORRIDOR, SMOKE AND FIRE RATED WALLS
NTS



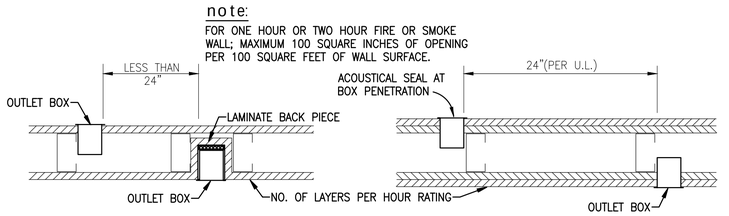
CONDUIT MARKER DETAIL
NTS



TYPICAL PULLBOX ENTRY DETAIL
NTS



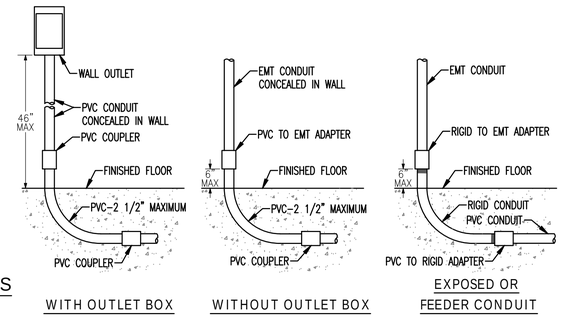
UNDERGROUND CONDUIT DETAIL
NOT TO SCALE



FIVE SIDED ELECTRICAL BOX

ADJACENT ELECTRICAL BOXES

WALL DETAILS - ELECTRICAL BOX INSTALLATION
NTS



WITH OUTLET BOX

WITHOUT OUTLET BOX

EXPOSED OR FEEDER CONDUIT

PVC STUB-UP DETAILS
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HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

ELECTRICAL DETAILS

PROJECT NUMBER	24107
DATED	03/28/2025

E-602

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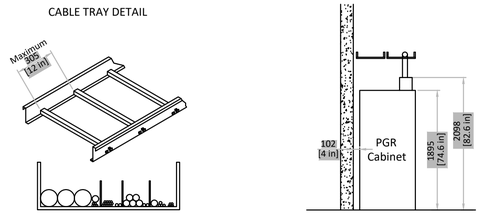
24110 Job No.

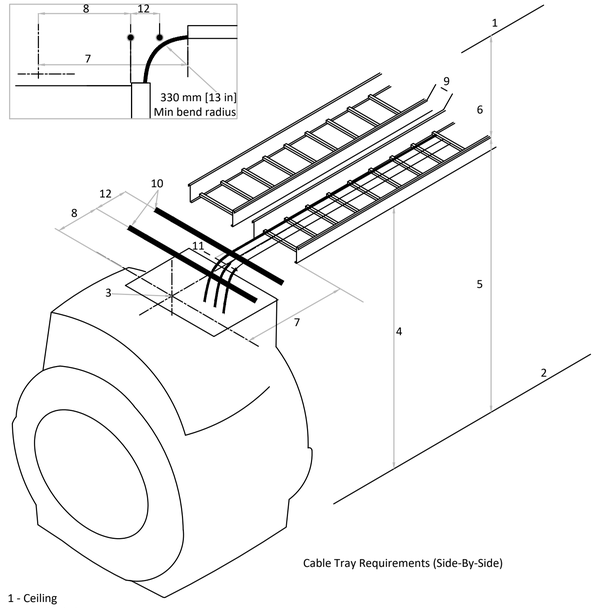
CABLE TRAY DETAIL



Minimum Cable Tray Width					
	PGR		ICC		OW
	Electrical	Air/Water	Electrical	Air/Water	Electrical
Pen Panel	300 [12 in]	N/A	N/A	450 [18 in]	76 [3 in]
PGR	N/A	N/A	76 [3 in]	150 [6 in]	76 [3 in]
ICC	76 [3 in]	150 [6 in]	N/A	N/A	N/A
OW	76 [3 in]	N/A	N/A	N/A	N/A

•EC to supply all cable tray, including all accessories for a complete and functional cable tray system. Coordinate installation with RF shielding installer.

CABLE TRAYS IN EQUIPMENT ROOM DETAIL
NTS



Cable Tray Requirements (Side-By-Side)

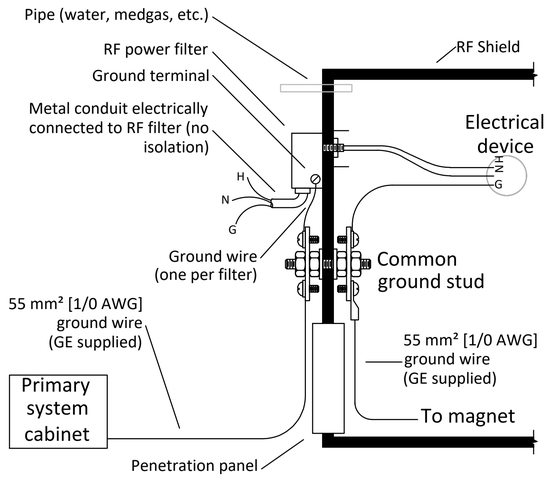
1 - Ceiling
2 - Finished Floor
3 - Magnet isocenter. Gradient cables must be centered on magnet isocenter.
4 - Minimum cable tray height required at back of Magnet: 2578 mm [101.5 in].
Tray height may be lower at other points to avoid obstructions.
5 - Maximum height from floor to top of tray (anywhere in Magnet room): 3251 mm [128 in].
6 - Minimum distance from top of cable tray to ceiling or other obstruction: 254 mm [10 in].
7 - Tray end to isocenter: 1336 ±12 mm [52.60 ±0.5 in].
8 - Other cable termination to isocenter: 955 ±12 mm [37.60 ±0.5 in] (IPM series).
9 - Minimum distance between trays: 12 mm [0.5 in].
10 - Non-ferrous cable support
11 - The center of the gradient cable group is 89 mm [3.5 in] from magnet center.
12 - Distance between non-ferrous cable support: ≤ 305 mm [12 in].

•EC to supply all cable tray, including all accessories for a complete and functional cable tray system. Coordinate installation with RF shielding installer.

CABLE TRAYS IN MAGNET ROOM DETAIL
NTS

GROUNDING REQUIREMENTS

- All power lines into the RF shielded room require an RF filter.
- All electrical devices (for example, outlets, light fixtures, and so on) must have a ground wire from device power source and be grounded to the RF Shield at the RF Common Ground Stud.
- Resistance between any two grounded devices must not exceed 0.1 ohm to ensure equal potential ground system within the Magnet Room.
- Do not ground non-MR equipment to the MR ground system.
- The common ground stud must be installed near the penetration point(s) of the GE equipment, into the RF shield between the Equipment Room and Magnet Room.
- For additional information refer to RF Shielded Room manual 5850260-1EN



TYPICAL MAGNET ROOM GROUNDING DETAIL
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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida Gulf Coast Hospital

REVISIONS:

No.	Description	Date

ELECTRICAL DETAILS

PROJECT NUMBER	24107
DATED	03/28/2025

E-603

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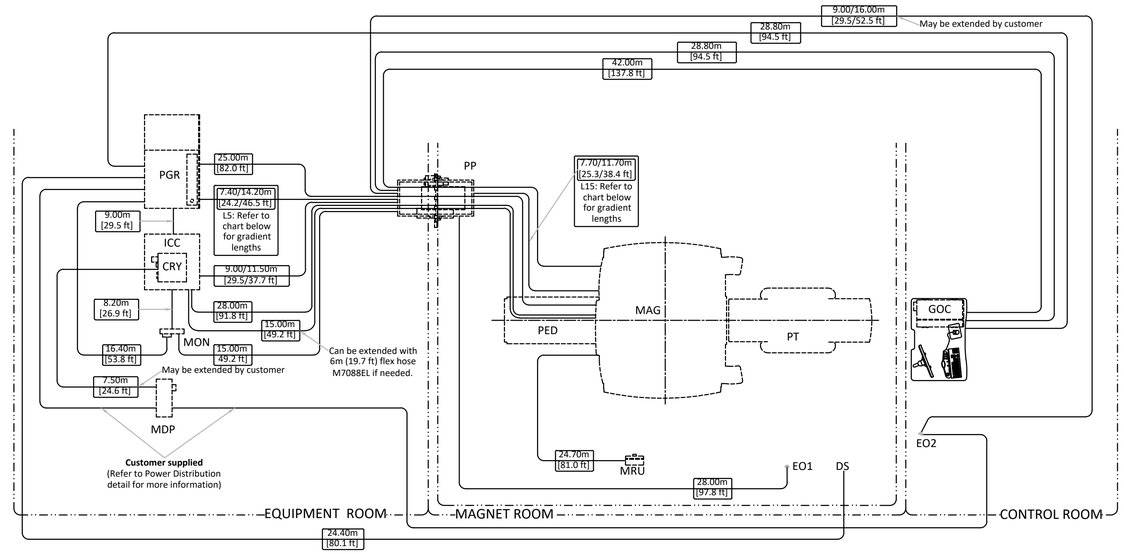
24110 Job No.



GRADIENT CABLE LENGTH OPTIONS

Length Identifier	Available lengths m (ft)	Proposed
L5 (Equipment Room)	3.7 (12.9)	-
	5.7 (18.7)	-
	7.7 (25.3)	-
	9.7 (31.8)	-
	11.7 (38.4)	-
	13.7 (45.0)	-
	15.7 (51.5)	-
L15 (Magnet Room)	4.6 (15.1)	-
	6.6 (21.6)	-
	8.6 (28.2)	-
	10.6 (34.7)	-
	12.6 (41.3)	-

CABLE ROUTING FOR ACCESSORIES

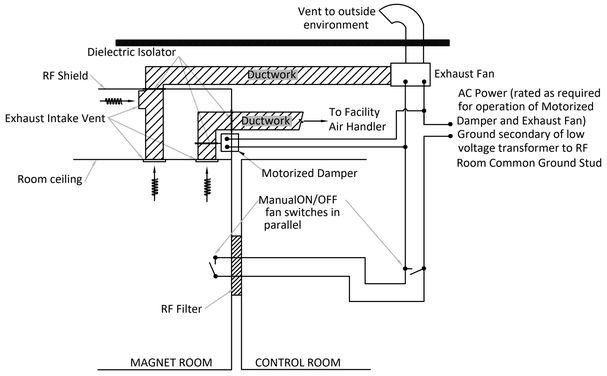
OPTION	FROM	TO	CABLE LENGTH m (ft)
Magnetic Resonance Elastography (MRE)	MRE	Magnet (Isocenter)	Nominal: 7.31 (24) Maximum: 10.06 (33)
	MRE	PP	15.24 (50)
	MRE	Ethernet Hub in PGR	15.24 (50)
	MRE	Customer Supplied Outlet	60Hz: 6.10 (20) 50Hz: 7.62 (25)
Multi-Nuclear Spectroscopy (MNS)	MNS	PGR	9.85 (32.3)
	MNS	PGR	7.85 (25.7)/14 (45.9)
	PP	PGR	8.2 (26.9)/14.35 (47)
Brainwave (BW)	BW	PP	18.3 (60)

GENERAL NOTE: PMI must validate proposed selectables and send confirmation to OTR. Refer to MyProjects if Proposed field is blank.
GOLDSEAL/SILVER PREFERRED NOTE: Cable lengths listed may differ from what is shipped with the system. Contact the Goldseal group for actual lengths to be delivered.
ROOM MOVE NOTE: Cable lengths listed may differ from what is included with reinstalled system. Contact the local field engineer for actual lengths to be delivered.

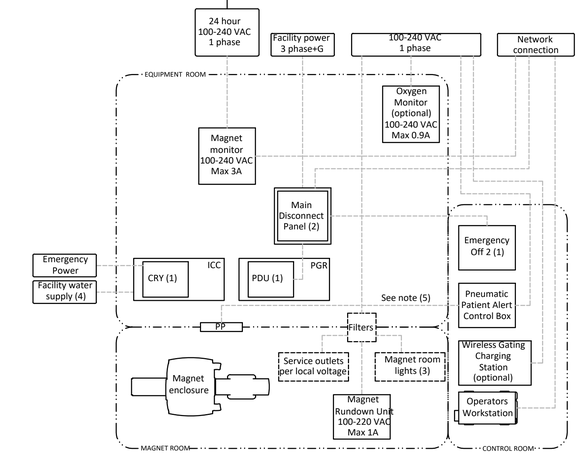
Order Configuration Options

Configuration	Equipment Room - site option	Magnet Room - site option	Proposed
A	Short	Short	-
B	Long	Short	-
C	Short	Long	-

FACILITY SUPPLIED WIRING DETAIL
NTS



MAGNET ROOM EXHAUST FAN SCHEMATIC
NTS



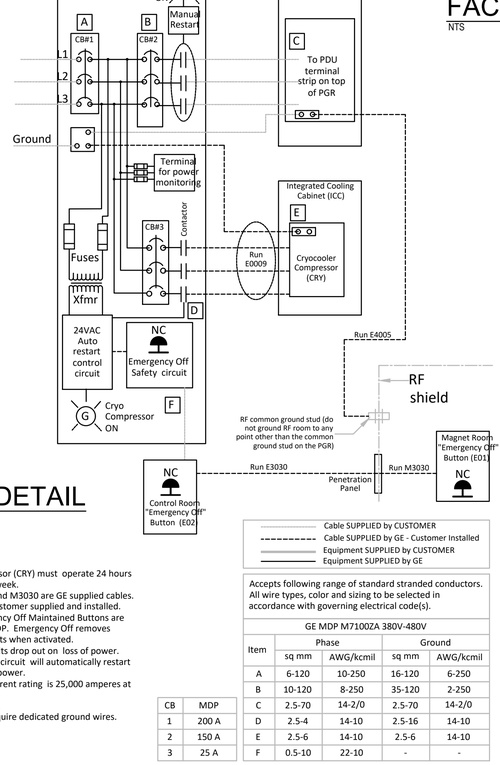
This diagram displays minimum power requirements for GE equipment and should be used as a guide to determine appropriate wire sizes per local regulatory requirements.

CRY Cryocooler Compressor (Inside ICC)
ICC Integrated Cooling Cabinet
PDU Power Distribution Unit (inside PGR)
PGR Power, Gradient, RF Cabinet
PP Penetration Panel

Notes :
(1) Refer to Power Distribution detail for more information
(2) Size incoming wires from GE equipment according to conductor sizes listed on Power Distribution detail.
A network connection must be provided near the MDP to support power quality monitoring.
(3) Refer to Lighting Requirements detail
(4) This group contains water lines which shall be routed separate from electrical lines (I.E. power and signal)
(5) A cable is supplied by GE but may be extended if needed.

Cable SUPPLIED BY CUSTOMER
Equipment SUPPLIED BY GE
Equipment SUPPLIED BY CUSTOMER

FACILITY INTERCONNECTIONS DETAIL
NTS



Facility input power
(380, 400, 415,
480 VAC)
3 Phase + GND

Cable SUPPLIED by CUSTOMER
Cable SUPPLIED by GE - Customer Installed
Equipment SUPPLIED by CUSTOMER
Equipment SUPPLIED by GE

Accepts following range of standard stranded conductors. All wire types, color and sizing to be selected in accordance with governing electrical code(s).

GE MDP M7100ZA 380V-480V

Item	Phase		Ground	
	sq mm	AWG/kcmil	sq mm	AWG/kcmil
A	6-120	10-250	16-120	6-250
B	10-120	8-250	35-120	2-250
C	2.5-70	14-2/0	2.5-70	14-2/0
D	2.5-4	14-10	2.5-16	14-10
E	2.5-6	14-10	2.5-6	14-10
F	0.5-10	22-10	-	-

CB	MDP
1	200 A
2	150 A
3	25 A

MRI POWER DISTRIBUTION DETAIL
NTS

NOTES:
1) Cryocooler Compressor (CRY) must operate 24 hours per day, 7 days per week.
2) Runs E0009, E3030 and M3030 are GE supplied cables. All other wiring is customer supplied and installed.
3) Two remote Emergency Off Maintained Buttons are supplied with the MDP. Emergency Off removes power from all outputs when activated.
4) All MDP output circuits drop out on loss of power. the Cryocooler (CRY) circuit will automatically restart upon restoration of power.
5) MDP Short circuit current rating is 25,000 amperes at 480 VAC.
6) MDP is NRTL labeled.
7) All feeder circuits require dedicated ground wires.

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REVISIONS:

No.	Description	Date

ELECTRICAL DETAILS

PROJECT NUMBER **24107**
DATED 03/28/2025

E-604

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24110 Job No.

22017
CONSTRUCTION DWGS
2025-04-04

LIGHTING FIXTURE SCHEDULE

Project: #24110 - HCA FL GULF COAST DIAGNOSTIC CENTER MRI

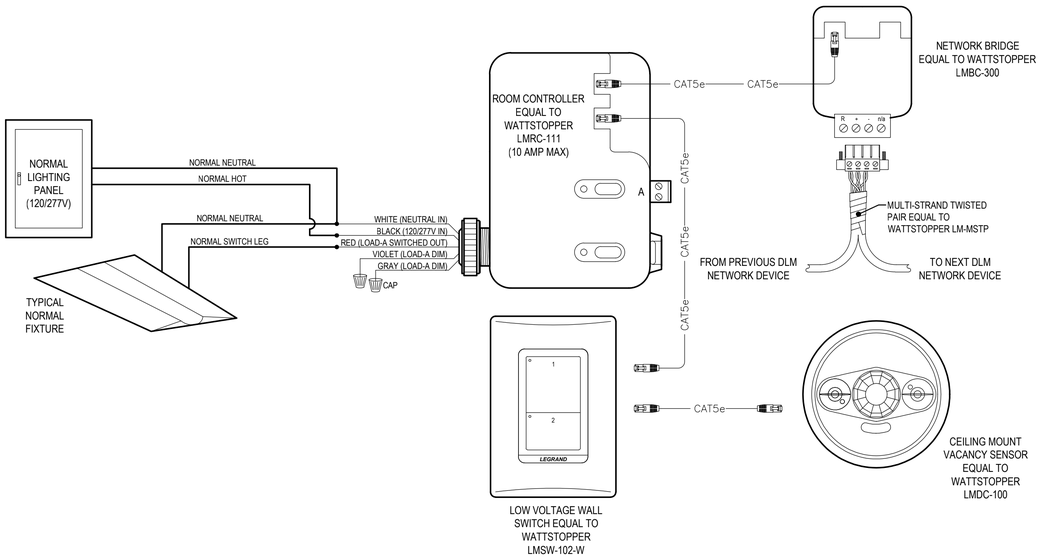
Note: Per electrical specifications, required alternate fixtures shall be submitted to the engineer for prior approval a minimum of (10) ten business days prior to bid date. Any required alternate fixtures not submitted for prior approval will not be reviewed.

Luminaire Designation	Manufacturer	Catalog Number	Connected Voltage	Luminaire Load (va)	Lamping Source	Color Rendering Index (CRI)	Kelvin Temperature	Mounting	Comments	Prior Approved Equal Required
L22	H.E. WILLIAMS	BP-22-LS/8CS-QS-DIM-UNV	120V		LED	80	4100K	CEILING - RECESSED	UTILIZE 3500 LUMEN SELECTION	YES
L24	H.E. WILLIAMS	BP-24-LS/8CS-QS-DIM-UNV	120V	28	LED	80	4000K	CEILING - RECESSED	UTILIZE 3500 LUMEN SELECTION	YES
L24E	H.E. WILLIAMS	BP-24-LS/8CS-EM/8W-QS-DIM-UNV	120V	28	LED	80	4000K	CEILING - RECESSED	UTILIZE 3500 LUMEN SELECTION	YES
L24S	H.E. WILLIAMS	BP-24-LS/8CS-QS-DIM-UNV BP24/WD/96	120V	28	LED	80	4000K	CEILING - SUSPENDED MOUNT 8'-0" AFF	UTILIZE 3500 LUMEN SELECTION	YES
L24SE	H.E. WILLIAMS	BP-24-LS/8CS-EM/8W-QS-DIM-UNV BP24/WD/96	120V	28	LED	80	4000K	CEILING - SUSPENDED MOUNT 8'-0" AFF	UTILIZE 3500 LUMEN SELECTION	YES
M22	KIRLIN LIGHTING	MRP-22290-2500L-41K-2X2	120V	35	LED	90	4100K	CEILING - RECESSED	LED DRIVERS PROHIBITED FROM MAGNET ROOM; PLACE IN CABINET IN MRI EQUIPMENT ROOM AND UTILIZE FILTER THROUGH RF SHIELD	YES
M22E	KIRLIN LIGHTING	MRP-22290-2500L-41K-2X2	120V	35	LED	90	4100K	CEILING - RECESSED	LED DRIVERS PROHIBITED FROM MAGNET ROOM; PLACE IN CABINET IN MRI EQUIPMENT ROOM AND UTILIZE FILTER THROUGH RF SHIELD; SUPPLY EMERGENCY POWER FROM EQUIPMENT ROOM INVERTER	YES
VT	H.E. WILLIAMS	96-4-L40/840-SFRA-GC2/L/10-DIM-UNV	120V	30	LED	80	4000K	CEILING - SUSPENDED MOUNT 9'-0" AFF		YES
VTE	H.E. WILLIAMS	96-4-L40/840-EM/10W-SFRA-GC2/L/10-DIM-UNV	120V	30	LED	80	4000K	CEILING - SUSPENDED MOUNT 9'-0" AFF		YES
WP	H.E. WILLIAMS	WPCS-L30/840-BZ-DIM-UNV	120V	28	LED	80	4000K	WALL - SURFACE	MOUNT ABOVE DOORWAY AND MATCH HEIGHT OF EXISTING WALLPACK FIXTURES.	YES
WPE	H.E. WILLIAMS	WPCS-L30/840-BZ-EM/6W-DIM-UNV	120V	28	LED	80	4000K	WALL - SURFACE	MOUNT ABOVE DOORWAY AND MATCH HEIGHT OF EXISTING WALLPACK FIXTURES.	YES
X	H.E. WILLIAMS	EXIT-R-EM-WHT-SDT-D	120V	2.5	LED	---	---	CEILING - SURFACE		YES
LTG CAB	KIRLIN LIGHTING	MRI-CABNT	---	---	---	---	---	WALL - SURFACE ABOVE INV	LOCATED IN MRI EQUIPMENT ROOM; EC TO SUPPLY AND INSTALL	YES
	KIRLIN LIGHTING	RFI-4100D	---	---	---	---	---	WALL - SURFACE	PROVIDE TWO (2) FOUR-CHANNEL FILTERS TO ACCOUNT FOR ALL SIX (6) FIXTURES; LEAVE TWO (2) TERMINAL SETS AS FUTURE SPARES.	YES
	KIRLIN LIGHTING	DVR-1400A	---	---	---	---	---	CABINET MOUNT	PROVIDE SIX (6) LED DRIVERS AND INSTALL IN MRI LIGHTING CABINET; LEAVE TWO (2) SPACES FOR FUTURE USE.	YES
INV	KIRLIN LIGHTING	EMI-03120	---	---	---	---	---	WALL - SURFACE BENEATH LTG CAB	EMERGENCY BACKUP SYSTEM; INSTALL TO OPERATE SPECIFIED DRIVERS IN MRI LIGHTING CABINET UPON POWER FAILURE.	YES

Lighting Space and Zones				Sequence of Operations								Low Voltage Switch Matrix (Button Labels to be designated by owner during installation)						
		ZONE OF CONTROL		CONTROL SCENARIOS								CONNECT TO NETWORKED ROOM CONTROLLER OR LIGHTING CONTROL PANEL						
Space Type	Room Number	Description	Designator	Manual On	Manual Off	Dimming	Multi-Level Control	Timeclock On	Timeclock Off	Occupancy Sensor On	Vacancy Sensor Off	S1.1 (1-Button)	S1.2 (2-Button)	S1.3 (3-Button)	S1.4 (4-Button)	Sm. (Integral Sensor, Line Voltage)	S (Toggle Switch, Line Voltage)	Remarks
Corridor	A100			X						X	X		X					
Control Room	A101			X	X	X				X	X		X	X				
Magnet Room	A102			X	X	X								X				
Equipment Room	A103			X	X												X	
Changing Room	A104			X	X					X	X					X		
Mechanical Room	A105			X	X												X	
Zone 1 Entry	N/A			X						X	X		X					
Building Exterior Lighting	N/A																	Utilize Existing Building Controls

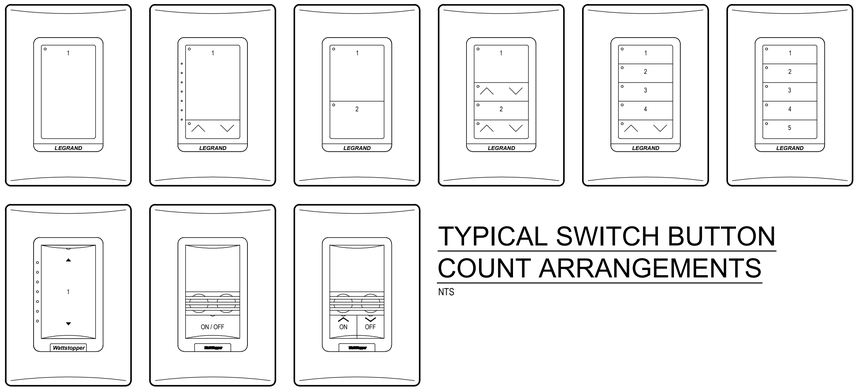
SWITCH FUNCTION / CONTROL MATRIX

Room Name	Room Num.	Low Voltage Switch Button Qty. (Switch Model #)	Switch Button Number and Correlated Function (Button labels are recommendations and shall be designated by owner during						Additional Notes
			Button #1		Button #2		Button #3		
			Function	Label	Function	Label	Function	Label	
Control Room	A101	LMSW-220	On	ON	Off	OFF			
		LMSW-211	On/Off	ON/OFF	Dim Up	Up Arrow	Dim Down	Down Arrow	
Magnet Room	A102	LMSW-211	On/Off	ON/OFF	Dim Up	Up Arrow	Dim Down	Down Arrow	Switch Located in Control Room.
Zone 1 Entry	N/A	LMSW-220	On	ON	Off	OFF			



TYPICAL NON-DIMMING LIGHTING CONTROL DETAILS

NTS



TYPICAL SWITCH BUTTON COUNT ARRANGEMENTS

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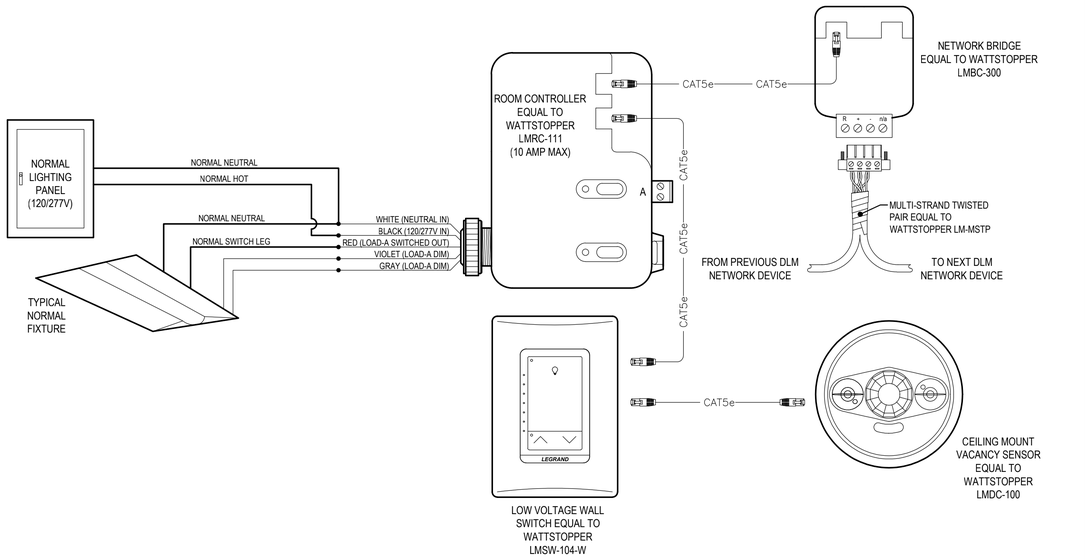
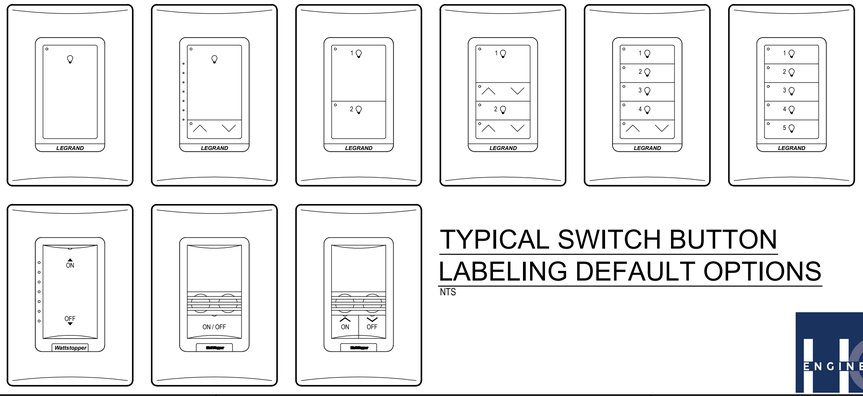


TYPICAL DIMMING LIGHTING CONTROL DETAILS

NTS



TYPICAL SWITCH BUTTON LABELING DEFAULT OPTIONS

NTS

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BID DOCUMENTS

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

REVISIONS:

No.	Description	Date

LIGHTING CONTROLS & FIXTURE SCHEDULE

PROJECT NUMBER	24107
DATED	03/28/2025

E-605

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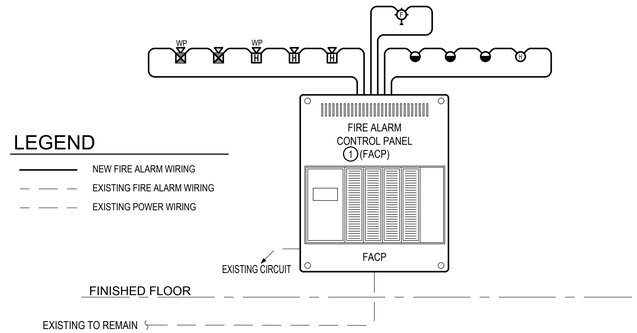
24110 Job No.



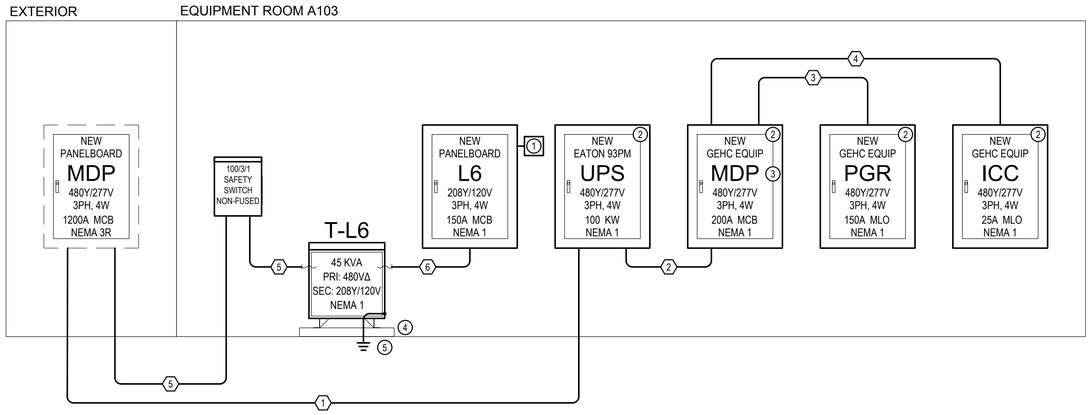
PARTIAL FIRE ALARM SYSTEM RISER
NTS

FIRE ALARM RISER GENERAL NOTES

1. THIS DIAGRAM IS NOT INTENDED TO SHOW EXACT QUANTITIES OF DEVICES. REFER TO PLAN FOR DEVICE QUANTITIES AND LOCATIONS.
2. THE RISER REPRESENTS A TYPICAL SYSTEM AND IS NOT INTENDED FOR INSTALLATION, SYSTEM SUPPLIER SHALL PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS.
3. PROVIDE ADDITIONAL MONITOR AND CONTROL MODULES AS RECOMMENDED BY THE SYSTEM SUPPLIER.
4. FIRE ALARM SYSTEM SHALL HAVE U.L. APPROVED DIGITAL ALARM DIALER/COMMUNICATOR TO SEND ALARM SIGNAL TO MONITORING SERVICE.
5. FIRE ALARM SYSTEM LOW VOLTAGE SOURCE AND BATTERY STAND-BY SHALL ENERGIZE ALL ITEMS IN FIRE ALARM SYSTEM THAT REQUIRE POWER.
6. REFER TO MECHANICAL DRAWINGS FOR SMOKE AND/OR SMOKE/FIRE DAMPER LOCATIONS. CONNECT TO FIRE ALARM SYSTEM AND TO 120V POWER.
7. VERIFY LOCATION AND QUANTITIES OF FLOW AND TAMPER SWITCHES WITH SPRINKLER CONTRACTOR.

KEYNOTES

1. EXISTING FIRE-LITE MS-5UD-3 FIRE ALARM CONTROL PANEL. ENSURE ALL NEW DEVICES ARE COMPATIBLE WITH EXISTING SYSTEM.



PARTIAL SINGLE LINE POWER RISER DIAGRAM
NTS

FEEDER SCHEDULE

DESIGNATION (#)	EQUIPMENT NAME	FED FROM	BREAKER RATING	BREAKER POLES	PARALLEL RUNS	CONDUIT	PH + N CONDUCTOR	PHASE & GROUNDED(N) CONDUCTOR	EQUIPMENT GROUND CONDUCTOR	SUPPLY SIDE BONDING CONDUCTOR	MATERIAL
1	MRI UPS	MDP	200	3	1	2"	4	3/0 AWG	6 AWG	N/A	CU
2	MRI MDP	MRI UPS	200	3	1	2"	4	3/0 AWG	6 AWG	N/A	CU
3	MRI PGR	MRI MDP	150	3	1	1-1/2"	4	1/0 AWG	6 AWG	N/A	CU
4	MRI ICC *	MRI MDP	25	3	1	3/4"	4	10 AWG	10 AWG	N/A	CU
5	T-L6	MDP	70	3	1	1"	3	4 AWG	8 AWG	N/A	CU
6	L6	T-L6	150	3	1	1-1/2"	4	1/0 AWG	N/A	6 AWG	CU

* MRI ICC CABLING TO BE PROVIDED BY GE HEALTHCARE

KEYNOTES

1. INSTALL SURGE SUPPRESSOR IN BREAKER POSITION NEAREST NEUTRAL BAR WITH 4#10, 1#10G IN 3/4"C. LEAD LENGTH SHALL NOT EXCEED UL 1449 4TH EDITION TEST OF 14".
2. EQUIPMENT SUPPLIED BY GE HEALTHCARE AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO GE HEALTHCARE DRAWINGS FOR ADDITIONAL INFORMATION.
3. NOTE THAT THE MRI MAIN DISCONNECT PANEL (MDP), AS NAMED BT GE HEALTHCARE, IS DISTINCTLY DIFFERENT FROM THE EXISTING MAIN DISTRIBUTION PANEL (MDP) DESPITE THE SIMILAR NAMING.
4. PROVIDE 4" CONCRETE PAD.
5. REFER TO GROUNDING DETAILS FOR ADDITIONAL INFORMATION.

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BID DOCUMENTS

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REVISIONS:

No.	Description	Date

SINGLE LINE RISERS

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24110 Job No.

PROJECT NUMBER 24107
DATED 03/28/2025

E-701

EXISTING POWER PANEL

MDP

SYSTEM 480/277V 3Φ 4W
RATING 1200A M.C.B. 35,000 AIC MINIMUM
ENCLOSURE NEMA 3R SURFACE MOUNT
OPTIONS BOLT ON BREAKERS; GE RELIAGEAR NEXT IN3212NN3H2

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
	SPACE ONLY			---	---	3	400 A	PANEL H1	
	SPACE ONLY			---					
	SPACE ONLY			---	---	3	400 A	MAMO	
	SPACE ONLY			---	---			SPACE ONLY	
	SPACE ONLY			---	**122000**	**3**	**200 A**	**MRI UPS**	
					77568	**3**	**100 A**	**MRI CHILLER**	
	SPACE ONLY			---	---	3	125 A	SPARE	
					---	3	60 A	TSS	
	EXISTING UNKNOWN LOAD	20 A	2	---	---	3	400 A	CTPET SCAN	
	SPARE	15 A	3	---					
	SPARE	15 A	3	---					
	PANEL L6 (VIA TRANSFORMER T-L6)	**70 A**	**3**	**34863**	---	3	400 A	PANEL H2	
	SPACE ONLY			---					
	SPACE ONLY			---	---	3	1200 A	MAIN BREAKER	
	A/C	300 A	3	---					

EXISTING DEMAND LOAD = 165000 VA ** / 831 = 198.6 A
NEW CONNECTED LOAD = 234431 VA / 831 = 282.1 A
TOTAL LOAD = 399431 VA / 831 = 480.7 A

NOTES:
* SHADED FONT INDICATES EXISTING BREAKERS/CIRCUITS; BOLD FONT INDICATES NEW BREAKERS/CIRCUITS TO BE PROVIDED AND INSTALLED IN EXISTING EMPTY SPACE.
** EXISTING DEMAND LOAD CALCULATED AT 125% OF PEAK VALUE OBTAINED FROM HISTORICAL UTILITY POWER BILLS.

*** SPECIAL NOTE ***
PROVIDE 'LSI' TRIP UNITS FOR BREAKERS GREATER THAN OR EQUAL TO 200A.

NEW POWER PANEL

L6

SYSTEM 208/120V 3Φ 4W
RATING 150A M.C.B. 10,000 AIC MINIMUM
ENCLOSURE NEMA 1 SURFACE MOUNT
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	LTG - MRI SUITE	20 A	1	702	528	1	20 A	EF-1	2
3	REC - CONTROL A101	20 A	1	720	864	1	20 A	EF-2	4
5	REC - CONTROL A101	20 A	1	720	1875	1	20 A	EWH-1	6
7	REC - CONTROL A101	20 A	1	540	800	1	20 A	REC - CONTROL A101 - GLOBAL OPERATOR CONSOLE	8
9	REC - MAGNET ROOM A102	20 A	1	360	800	1	20 A	REC - CONTROL A101 - REMOTE CONTROL PANEL	10
11	REC - EQUIP ROOM A103	20 A	1	720	---	1	20 A	SPARE	12
13	REC - VESTIBULE, EXTERIOR	20 A	1	720	800	1	20 A	REC - EQUIPMENT A103 - MAGNET MONITOR	14
15	REC - CORR A100, CHANGING A104, MECH A105, EXTERIOR	20 A	1	1080	1500	1	20 A	REC - EQUIPMENT A103 - INJECTOR POWER SUPPLY	16
17	SPARE	20 A	1	---	1200	1	20 A	RF FILTER POWER	18
19	SPARE	20 A	1	---	1000	1	20 A	ACCESS CONTROL POWER SUPPLIES	20
21	SPARE	20 A	1	---	---	1	20 A	SPARE	22
23	SPARE	20 A	1	---	---	1	20 A	SPARE	24
25	SPACE ONLY	---	---	---	---	---	---	SPACE ONLY	26
27	SPACE ONLY	---	---	---	---	---	---	SPACE ONLY	28
29	SPACE ONLY	---	---	---	3064	2	25 A	MHP-1 & WM-1.1	30
31	SPACE ONLY	---	---	---					32
33	HP-1	30 A	2	2941	3064	2	25 A	MHP-2 & WM-2.1	34
35									36
37									38
39	HP-1	40 A	2	10865	---	3	30 A	SURGE PROTECTIVE DEVICE	40
41									42

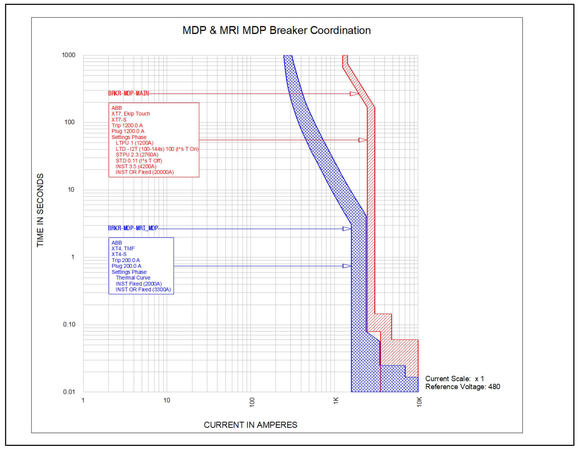
TOTAL CONNECTED LOAD = 34863 VA / 360 = 96.8 A

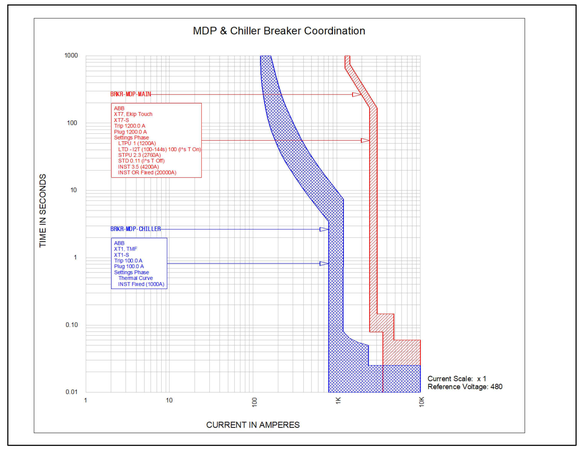
NOTES:
*

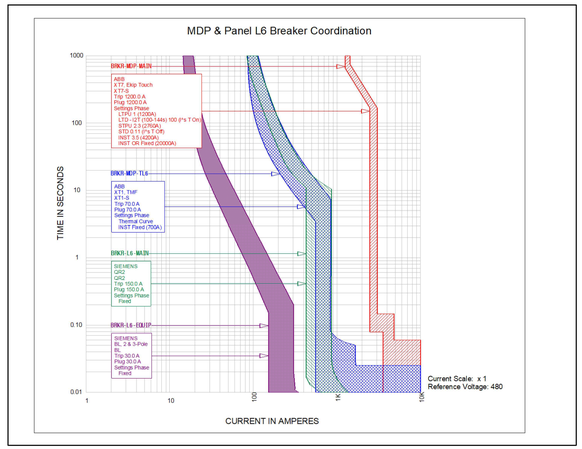
MECHANICAL, PLUMBING, & MRI EQUIPMENT COORDINATION SCHEDULE

(VERIFY ALL EQUIPMENT CIRCUIT REQUIREMENTS WITH MANUFACTURERS SHOP DRAWINGS PRIOR TO ROUGH-IN)

EQUIPMENT DESIGNATION	DESCRIPTION	CFM	VOLT	Φ	ELECTRICAL LOAD: MOTOR(S) FLA QTY	LARGEST	SUM OF REMAINING	ELECTRIC HEAT KW	OTHER VA	TOTAL CONNECTED VA	PROTECTION MCA	MOCP	SPECIFIED TRIP	POLE	CONDUCTOR / CONDUIT SIZE: CONDUCTORS SETS	QTY.	SIZE	GND	CONDUIT	DISC.	REMARKS
CBOXX-100	CHILLER		480	3	6	35.00	58.3			77568	66.00	100	100	3	1	4	#3	#8	1-1/4"	100/3/3R	
AHU-1	AIR HANDLER UNIT	920	208	3	1	2.40		10		10865	37.74	40	40	2	1	4	#8	#10	3/4"	60/3/1	
HP-1	HEAT PUMP		208	1	2	13.50	0.64			2941	19.00	30	30	2	1	3	#10	#10	3/4"	30/2/3R	
MHP-1	MINI-SPLIT HEAT PUMP	1940	208	1	3	7.00	7.4			2995	19.00	25	25	2	1	3	#10	#10	3/4"	30/2/3R	OUTDOOR UNIT SUPPLIES POWER TO INDOOR UNIT
MHP-2	MINI-SPLIT HEAT PUMP	1940	208	1	3	7.00	7.4			2995	19.00	25	25	2	1	3	#10	#10	3/4"	30/2/3R	OUTDOOR UNIT SUPPLIES POWER TO INDOOR UNIT
WM-1.1	MINI-SPLIT WALL MOUNT UNIT	775	208	1	1	0.27				69	1.00	---	25	2	1	3	#10	#10	3/4"	2P TOGGLE	INDOOR UNIT RECEIVES POWER FROM OUTDOOR UNIT.
WM-2.1	MINI-SPLIT WALL MOUNT UNIT	775	208	1	1	0.27				69	1.00	---	25	2	1	3	#10	#10	3/4"	2P TOGGLE	INDOOR UNIT RECEIVES POWER FROM OUTDOOR UNIT.
EF-1	EXHAUST FAN (1/6 H.P)	210	120	1	1	4.40				528	5.50	15	15	1	1	2	#12	#12	3/4"	1P TOGGLE	INTERLOCK WITH AHU-1 DAMPER.
EF-2	EXHAUST FAN (1/3 H.P)	1500	120	1	1	7.20				864	9.00	20	20	1	1	2	#12	#12	3/4"	1P TOGGLE	INTERLOCK WITH SPECIFIED PUSH BUTTONS.
EWH-1	ELECTRIC WATER HEATER		120	1				1.5		1875	15.63	20	20	1	1	2	#12	#12	3/4"	30/2/1	
UPS	UNINTERRUPTABLE POWER SUPPLY		480	3								200	200	3	1	4	#3/0	#6	2"		EATON 93PM UPS; PROVIDED BY GE HEALTHCARE
MDP	MAIN DISCONNECT PANEL		480	3						129000		200	200	3	1	4	#3/0	#6	2"	INTEGRAL BRKR	EQUIPMENT PROVIDED BY GE HEALTHCARE
PGR	POWER CABINET		480	3								150	150	3	1	4	#1/0	#6	2"	MDP BREAKER	EQUIPMENT PROVIDED BY GE HEALTHCARE
ICC	INTEGRATED COOLING CABINET		480	3								25	25	3	1	4	#10	#10	3/4"	MDP BREAKER	EQUIPMENT PROVIDED BY GE HEALTHCARE







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BID DOCUMENTS

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Outpatient Rehabilitation & Diagnostic Center
DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida Gulf Coast Hospital

REVISIONS:

No.	Description	Date

ELECTRICAL SCHEDULES & TCC CURVES

PROJECT NUMBER	**24107**
DATED	03/28/2025

E-801

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Caleb W. Leonard; FL. PE No.91782

24110
Job No.

22017
CONSTRUCTION DWGS
2025-04-04

TELECOMMUNICATIONS LEGEND

MISCELANIOUS SYSTEMS SYMBOLS			
FLR	CLG	WALL	
ⓥ	▽	▽	COMMUNICATIONS OUTLET WITH COUPLERS AND COVERPLATE; INSTALL 3/4"C WITH CABLE UP INTO CEILING SPACE. SEE DETAILS FOR CONDUIT REQUIRED LOCATIONS. WALL MOUNT 18" AFF UNO.
ⓥ	▽	▽	TELEPHONE OUTLET WITH COUPLERS AND COVERPLATE; INSTALL 3/4"C WITH CABLE UP INTO CEILING SPACE. SEE DETAILS FOR CONDUIT REQUIRED LOCATIONS.
	WAP	⏚	WIRELESS ACCESS POINT: CONTRACTOR TO PROVIDE CABLE IN 3/4" CONDUIT UNO. SEE DETAILS FOR CONDUIT REQUIRED LOCATIONS.
	CR		EXISTING COMMUNICATIONS RACK; FLOOR MOUNT

COMMUNICATIONS OUTLET DESIGNATIONS	
◁ ###.## / X	"X" INDICATES NUMBER OF PORTS. NO NUMBER INDICATES TWO(2). "###.##" INDICATES COUPLER NUMBERS.
▽ +XX''	LETTERS +XX" ADJACENT TO SYMBOL INDICATES RECEPTACLE MOUNTING HEIGHT. WHERE NO HEIGHT IS INDICATED MOUNT 18" AFF TO C/L. +AC" = ABOVE COUNTER. +TV" = VERIFY HEIGHT OF TV WITH OWNER.

RACEWAY SYMBOLS			
FLR	CLG	WALL	
ⓙ	ⓙ	ⓙ	JUNCTION BOX
			CONDUIT CAP
		UP	CONDUIT TURNED UP
		DN	CONDUIT TURNED DOWN
			RACEWAY INSTALLED CONCEALED IN WALLS/ABOVE CEILING
			RACEWAY INSTALLED CONCEALED BELOW GRADE/SLAB/FLOOR
			RACEWAY INSTALLED EXPOSED

GROUNDING SYMBOLS	
⏚	GROUND ROD
⏚	GROUNDING ELECTRODE/GROUNDING ELECTRODE SYSTEM

NOTE REFERENCES	
ⓘ	TYPICAL/NEW WORK KEYNOTE REFERENCE
◇	DEMO KEYNOTE REFERENCE
ⓘ	FEEDER NOTE REFERENCE
⚠	REVISION REFERENCE

CABLING COLOR CODE	
BLUE	COMMUNICATIONS OUTLET TO COMM RACK
BLUE	COMM ROOM - COMMUNICATIONS OUTLET PATCH CORD
GRAY	WIRELESS ACCESS POINT TO COMM RACK
GRAY	COMM ROOM - WIRELESS ACCESS POINT PATCH CORD
RED	FIRE ALARM PANEL TO COMM RACK
BLACK	SECURITY PANEL TO COMM RACK
WHITE	LIGHTING CONTROL COMMUNICATIONS CABLING

CONDUIT ROUTING NOTES

A. LOCATION AND ROUTING OF CONDUIT IS APPROXIMATE AND DEPICTS DESIGN INTENT ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING AND FIELD VERIFYING FINAL CONDUIT ROUTING. THE CONTRACTOR SHALL COORDINATE THE FINAL ROUTING OF CONDUITS TO AVOID CONFLICTS WITH OTHER TRADES WHILE MINIMIZING CHANGES IN DIRECTION AND OVERALL CONDUIT LENGTH.

B. SUPPORT CONDUIT FROM BUILDING STRUCTURE. DO NOT SUPPORT CONDUITS FROM OTHER SYSTEM COMPONENTS OR SUPPORTS.

C. TERMINATE ALL CONDUIT ENDS WITH THREADED PLASTIC INSULATING BUSHINGS. BUSHINGS MUST FIT TIGHTLY ON CONDUIT CONNECTOR THREADS. INSTALL BUSHINGS PRIOR TO PULLING CABLES.

D. IDENTIFY ALL CONDUITS AND PULLBOXES WITH BLUE PAINT. PAINT EACH CONDUIT COUPLING AND PULLBOX COVER.

COMMUNICATIONS LABELING NOTES

A. ALL COMMUNICATION OUTLET, PATCH PANELS, RACKS, AND CONNECTION BLOCKS SHALL BE LABELED USING THE FINAL ROOM NUMBERS OBTAINED FROM ARCHITECT.

B. ALL COMMUNICATIONS EQUIPMENT LABELS SHALL BE PRINTED USING FACTORY LABEL SHEETS AS PROVIDED BY MANUFACTURER.

OUTLET LOCATION NOTES

A. ALL COMMUNICATION OUTLET LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EACH OUTLET WITH THE ARCHITECT AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN.

B. COMMUNICATION OUTLET LOCATIONS SHALL BE COORDINATED WITH WINDOWS, CASEWORK, DOOR SWINGS, COUNTER BACKSPLASHES AND ALL OTHER OBSTRUCTIONS.

TELECOM GENERAL NOTES

A. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS FOR EXACT SIZE AND LOCATION OF EQUIPMENT WHICH IS FURNISHED BY OTHERS.

B. DEVICES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS FOR EACH SPACE.

C. ALL METAL PARTS OF COMMUNICATION RACKS AND EQUIPMENT SHALL BE GROUNDED THROUGH GROUND BUS. CONTRACTOR SHALL VERIFY THAT NO TWO PIECES OF EQUIPMENT IN ANY TELECOMMUNICATIONS SYSTEM HAVE A POTENTIAL DIFFERENCE GREATER THAN 500 MILLIVOLTS.

D. CONTRACTOR SHALL SUPPLY A MICARTA NAMEPLATE MECHANICALLY AFFIXED FOR EACH COMMUNICATIONS RACK, BACKBOARD AND TERMINAL CABINET. THE NAMEPLATE SHALL IDENTIFY THE SYSTEM..

E. ALL TURNS IN CONDUIT SHALL BE SWEPT CONDUIT OR MANUFACTURED ELBOWS. NO CONDULETS WILL BE ALLOWED.

F. ALL COMMUNICATIONS CABLING, WHETHER INSTALLED IN CONDUIT OR NOT, SHALL BE INSTALLED A MINIMUM OF 8" CLEAR FROM 120V ELECTRICAL, ALARM OR OTHER WIRING AND 12" CLEAR FROM MOTORS, LIGHT FIXTURES OR SOUND SYSTEM. A MINIMUM 6" CLEARANCE FOR THE SAME SHALL APPLY AT PERPENDICULAR CROSSOVER POINTS.

G. ALL JUNCTION BOXES, CONDUIT, HANGERS AND CABLING SHALL BE MOUNTED HIGH ENOUGH ABOVE THE SUSPENDED CEILING SO AS NOT TO INTERFERE WITH THE REMOVAL OR SERVICING OF CEILING TILES, LIGHT FIXTURES OR THE HVAC SYSTEM.

H. ALL EXPOSED CONDUITS, BOXES, STRAPS AND HANGERS IN THE CONTRACT AREA THAT ARE PART OF THE TELECOM SYSTEM SHALL BE PAINTED TO MATCH ADJACENT FINISH.

I. PROVIDE CONCRETE MARKER AT END OF ALL CONDUITS STUBBED OUT OF BUILDING FOR FUTURE USE. MARKER SHALL BE 6" DIA X 18" HIGH WITH 2" ABOVE FINISHED GRADE. INSCRIBE IN TOP OF MARKER "T" FOR TELECOM.

J. IN NO CASE SHALL ANY TELECOM CONDUIT HAVE MORE THAN TWO 90 DEGREE BENDS WITHOUT TERMINATING IN A PULLBOX. PULLBOXES SHALL NOT BE USED FOR A CHANGE OF DIRECTION.

K. VERIFY EXACT LOCATION OF ALL FLOOR OUTLETS WITH THE ARCHITECT PRIOR TO ROUGHING-IN.

L. ALL CABLES SHALL BE LABELED AT BOTH ENDS WITH THE COMMUNICATIONS OUTLET NUMBER AND THE PATCH PANEL OUTLET NUMBERS.

M. ALL TELECOMMUNICATION OUTLETS SHALL BE INSTALLED FLUSH IN WALLS OR FLOOR BOXES.

N. ALL PENETRATIONS OF FLOORS AND WALLS WHICH EXTEND TO THE UNDERSIDE OF THE FLOOR OR ROOF DECK SHALL BE FIRESTOPPED. FIRESTOPPING SHALL BE PROVIDED USING U.L. LISTED SYSTEMS WITH THE FIRE RATING EQUAL TO OR GREATER THAN THE FIRE RATING OF THE FLOOR OR WALL ASSEMBLY. INSTALL ALL FIRESTOP MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT A DETAIL FOR EACH TYPE OF PENETRATIONS REQUIRED.

O. PROVIDE BUSHINGS ON ALL CONDUIT.

P. PROVIDE NO LESS THAN ONE SINGLE PORT DATA CABLE TO EACH OF THE FOLLOWING SPECIAL SERVICE CABINETS: A) FIRE ALARM SYSTEM, B) SECURITY SYSTEM, C) CCTV SYSTEM. COORDINATE LOCATIONS AND INTERFACE REQUIREMENTS WITH THE INSTALLER FOR EACH SPECIAL SYSTEM. CABLING SHALL BE HOME RUN IN CONDUIT TO COMM RACK.

Q. THE INSTALLING CONTRACTOR SHALL INSTALL THE FOLLOWING AMOUNTS OF COMMUNICATIONS CABLE SLACK: COMMUNICATIONS OUTLET - 1'6"; TELECOM CLOSET/ROOM - 20'-0".

ACCESS CONTROL LEGEND

SYSTEM SYMBOLS	
ⓒ	CARD READER, MOUNT 48" C/L TO FINISHED FLOOR / GRADE. COORDINATE FINAL LOCATION WITH OWNER / ARCHITECT PRIOR TO ROUGHING-IN.
ACSP	ACCESS CONTROL SYSTEM PANEL
DPS	DOOR POSITION SWITCH
EM	ELECTRIFIED LOCKSET
JB	JUNCTION BOX
MB	MORTAR BOX
PS	POWER SUPPLY
PT	POWER TRANSFER
RQE	REQUEST-TO-EXIT

CARD READER NOTES

CARD READER SHALL BE HSPD-12 COMPLIANCE, BOSCH B942 (PIV/KEYPAD), WHERE WALL-MOUNTED. INSTALL USING FACTORY MOUNTING PLATE PROVIDED BY MANUFACTURER.

PROVIDE SINGLE GANG DEEP WALL BOX FOR CARD READERS INSTALLED IN WALLS. PROVIDE MASONRY BOX WHERE MOUNTED IN BLOCK / BRICK. DO NOT PROVIDE AN OVERSIZED PLATE TO COVER UNFINISHED OPENINGS AROUND WALL BOX. ALL EXTERIOR CARD READER LOCATIONS SHALL BE WATERTIGHT.

DOOR POSITION SWITCH NOTE

DOOR POSITION SWITCHES SHALL BE NORMALLY OPEN. EACH SWITCH SHALL BE HELD IN THE CLOSED POSITION BY MAGNET WHEN DOOR IS CLOSED AND MAGNET IS WITHIN MANUFACTURER'S SPECIFIED GAP DISTANCE FROM SWITCH. THE SWITCH SHALL MOVE TO THE OPEN POSITION WHEN DOOR IS OPENED. OPEN CIRCUIT SHALL GENERATE AN ALARM STATE UNLESS A RQE IS SIGNALED.

SECURE DOOR OPERATION

PRESENTING VALID DOOR CREDENTIAL TO CARD READER SIGNALS ELECTRIC UNLOCKING OF THE ELECTRIFIED EXIT DEVICE OR THE ELECTRIFIED LOCKSET. THE DOOR POSITION SWITCH MONITORS THE STATUS OF EACH DOOR FOR DOOR HELD OPEN OR UNAUTHORIZED ENTRY. A REQUEST-TO-EXIT SWITCH INTERNAL TO EXIT DEVICE OR LOCKSET AND CONNECTED TO INTRUSION DETECTION SYSTEM IS ACTIVATED UPON EXITING FROM THE SECURE SIDE SIGNALING AN AUTHORIZED EXITING.

ACCESS CONTROL GENERAL NOTES

A. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS FOR EXACT SIZE AND LOCATION OF EQUIPMENT WHICH IS FURNISHED BY OTHERS.

B. ALL ACCESS CONTROL CABLING SHALL BE RUN CONTINUOUSLY IN CONDUIT. CONDUIT TYPES ARE AS DEFINED IN ELECTRICAL DRAWINGS & SPECIFICATIONS. MINIMUM SIZE IS 3/4" EXCEPT AT DOOR FOR CONNECTIONS WHERE 1/2" IS ALLOWED. ALL CONDUIT SHALL BE CONCEALED IF AT ALL POSSIBLE WHERE EXISTING WALLS DO NOT PROVIDE FOR IT. EXPOSED CONDUITS TO PUBLIC SHALL BE GRC.

C. ALL JUNCTION BOXES, CONDUIT, HANGERS AND CABLING SHALL BE MOUNTED HIGH ENOUGH ABOVE THE SUSPENDED CEILING SO AS NOT TO INTERFERE WITH THE REMOVAL OR SERVICING OF CEILING TILES, LIGHT FIXTURES OR THE HVAC SYSTEM. PAINT ACCESS CONTROL JUNCTION BOX COVERS AND CONDUIT COUPLERS WHITE FOR ENTIRE ACCESS CONTROL SYSTEM.

D. ALL EXPOSED CONDUITS, BOXES, STRAPS AND HANGERS IN THE CONTRACT AREA THAT ARE PART OF THE ACCESS CONTROL SYSTEM SHALL BE PAINTED TO MATCH ADJACENT FINISH.

E. ALL PENETRATIONS OF FLOORS AND WALLS WHICH EXTEND TO THE UNDERSIDE OF THE FLOOR OR ROOF DECK SHALL BE FIRESTOPPED. FIRESTOPPING SHALL BE PROVIDED USING U.L. LISTED SYSTEMS WITH THE FIRE RATING EQUAL TO OR GREATER THAN THE FIRE RATING OF THE FLOOR OR WALL ASSEMBLY. INSTALL ALL FIRESTOP MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT A DETAIL FOR EACH TYPE OF PENETRATIONS REQUIRED.

F. PROVIDE BUSHINGS ON ALL CONDUIT ENDS.

G. REFER TO DOOR HARDWARE SPECIFICATION AND DRAWINGS TO COORDINATE DOOR HARDWARE TYPES. POWER SUPPLIES SERVING SECURE DOORS WITH EXIT DEVICES SHALL BE PROVIDED AS PART OF THE DOOR HARDWARE PACKAGE AND SHALL BE THE SAME MANUFACTURER AS THE EXIT DEVICE.

H. ALL DOORS SHALL HAVE MECHANICAL FREE EGRESS FROM SECURE SIDE TO UNSECURE SIDE UNLESS NOTED OTHERWISE BY DOOR HARDWARE SPECIFICATIONS.

I. ALL DOORS SHALL FAIL SECURE UPON LOSS OF POWER TO LOCKING DEVICE UNLESS NOTED OTHERWISE BY DOOR HARDWARE SPECIFICATIONS.

J. ALL SECURE DOORS SHALL HAVE REQUEST TO EXIT INTEGRAL TO THE DOOR HARDWARE SUCH THAT EGRESS THROUGH A SECURE DOOR FROM THE SECURE SIDE SHALL NOT GENERATE AN INTRUSION ALARM, UNLESS NOTED OTHERWISE BY DOOR HARDWARE SPECIFICATION.

K. PROVIDE WEATHERPROOF CARD READERS AND PUSH TO ENTER DEVICES AND CONSTRUCTION TECHNIQUES AT ALL EXTERIOR LOCATIONS.

L. CARD READER LOCATIONS ARE APPROXIMATE. EXACT LOCATION WITHIN VICINITY OF THE DOOR SERVED TO BE DETERMINED BY OWNER AND ARCHITECT PRIOR TO ROUGHING-IN AT NO COST TO OWNER.

M. FINAL DOOR NUMBERS SHALL BE BASIS FOR SYSTEM LABELING AND PROGRAMMING. COORDINATE FINAL NUMBERS WITH OWNER AND ARCHITECT PRIOR TO PROGRAMMING AND LABELING.

N. AN INTRUSION ALARM SYSTEM SHALL BE SET UP AS AN EXTENSION OF AND FULLY INTEGRATED WITH THE ACCESS CONTROL SYSTEM.

O. ALL CONDUIT AT SECURE AND MONITORED DOORS SHALL BE MOUNTED ON THE SECURE SIDE.

Sheet List Table

ABBREVIATIONS	
ACS	ACCESS CONTROL SYSTEM
ACSC	ACCESS CONTROL SYSTEM CONTRACTOR
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
CAT 6	CATEGORY 6
CAT 6A	CATEGORY 6 AUGMENTED
CO	COMMUNICATIONS OUTLET
CP	CONSOLIDATION POINT
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
CLG	CEILING
DN	DOWN
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL
FA	FIRE ALARM
FLR	FLOOR
FO	FIBER OPTIC
GC	GENERAL CONTRACTOR
GND	GROUNDED
HH	HANDHOLE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
JB	JUNCTION BOX
LAN	LOCAL AREA NETWORK
um	MICRON / MICROMETER
MTD	MOUNTED
MTG	MOUNTING
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
N/A	NOT APPLICABLE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PR	PAIR
PP	PATCH PANEL
RMU	RACK MOUNT UNIT
SM	SINGLE MODE
STR	STRANDS
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
UNO	UNLESS NOTED OTHERWISE
WAP	WIRELESS ACCESS POINT

APPLICABLE CODE REFERENCES
FLORIDA BUILDING CODE, 8TH EDITION 2023
NATIONAL ELECTRIC CODE (NEC) NFPA 70 2020
NFPA 72, 2019 EDITION, NATIONAL FIRE ALARM AND SIGNALING CODE
NFPA 1, THE FIRE CODE FLORIDA 2021 EDITION
NFPA 101, THE LIFE SAFETY CODE®, FLORIDA 2021 EDITION
FLORIDA FIRE PREVENTION CODE (FFPC) 2023
GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF HOSPITALS, 2022 EDITION.

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DIAGNOSTICS MRI ADDITION
2024 STATE STREET, PANAMA CITY, FL 32405

HCA Florida
Gulf Coast Hospital

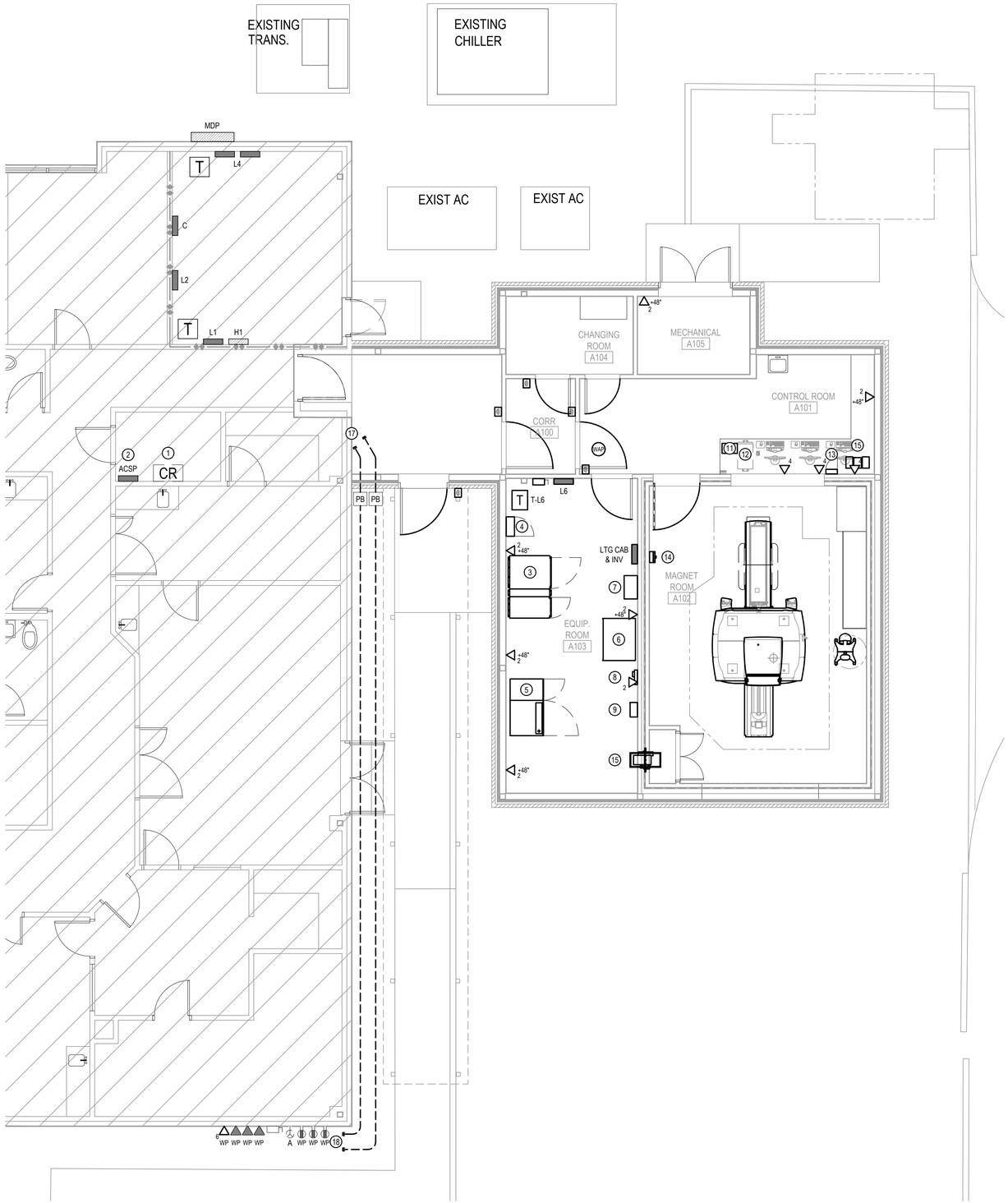
REVISIONS:

No.	Description	Date

LEGEND AND NOTES

PROJECT NUMBER	**24107**
DATED	03/28/2025

T-001



GENERAL NOTES

1. COORDINATE ALL INSTALLATIONS WITHIN MAGNET ROOM WITH RF SHIELDING INSTALLER. ENSURE NECESSARY FILTERS AND NON-FERROUS CONSTRUCTION IS UTILIZED. PROVIDE LEAD SHEATHING FOR ANY TELECOM INSTALLATION WITHIN RF SHIELDED WALLS AND ELSEWHERE DEEMED NECESSARY.
2. COORDINATE ALL INSTALLATION WITH GE HEALTHCARE DRAWINGS TO INCLUDE ANY ADDITIONAL REQUIREMENTS OUTLINED IN THOSE DOCUMENTS THAT HAVE OTHERWISE NOT BEEN CAPTURED WITHIN THESE SHEETS.
3. UNLESS OTHERWISE NOTED, THE EC SHALL PROVIDE ALL NECESSARY CONDUIT AND/OR CABLE TRAY BETWEEN PIECES OF GE HEALTHCARE EQUIPMENT REGARDLESS OF THE EQUIPMENT INSTALLER. THE EC SHALL ALSO PROVIDE THE NECESSARY POWER AND/OR CONTROL CABLING WHERE INDICATED BY GE HEALTHCARE.

KEYNOTES

1. EXISTING TELECOMMUNICATIONS RACK. ROUTE ALL DATA RUNS BACK TO THIS LOCATION. COORDINATE LANDINGS WITH HOSPITAL STAFF.
2. EXISTING LENEL S2 ACCESS CONTROL SYSTEMS PANEL. FIELD VERIFY EXACT MODEL AND PROVIDE DEVICES COMPATIBLE WITH EXISTING SYSTEM.
3. EATON 93PM UNINTERRUPTIBLE POWER SUPPLY (UPS) SUPPLIED BY GEHC AND INSTALLED BY EC.
4. MRI MAIN DISCONNECT PANEL (MDP) SUPPLIED BY GEHC AND INSTALLED BY EC.
5. POWER, GRADIENT, RF CABINET (PGR) SUPPLIED AND INSTALLED BY GEHC.
6. INTEGRATED COOLING CABINET (ICC) SUPPLIED AND INSTALLED BY GEHC.
7. CHILLER INTERFACE PANEL (CIP) SUPPLIED BY GEHC AND INSTALLED BY MECHANICAL CONTRACTOR. NO TELECOM CONNECTION REQUIRED.
8. MAGNET MONITOR (MON) SUPPLIED AND INSTALLED BY GEHC. COORDINATE DATA OUTLET MOUNTING HEIGHT WITH MANUFACTURER RECOMMENDATION.
9. INJECTOR POWER SUPPLY (IPS) SUPPLIED BY BAYER.
10. INJECTOR HEAD ON PEDESTAL (IHP) SUPPLIED BY BAYER.
11. INJECTOR CONTROLLER (IC) SUPPLIED BY BAYER.
12. GLOBAL OPERATOR CONSOLE (GOC) SUPPLIED AND INSTALLED BY GEHC.
13. REMOTE CONTROL PANEL (RCP) SUPPLIED BY GEHC AND INSTALLED BY EC.
14. MAGNET RUNDOWN UNIT (MRU) SUPPLIED AND INSTALLED BY GEHC.
15. PENETRATION PANEL (PP) SUPPLIED AND INSTALLED BY GEHC.
16. MUSIC SYSTEM (MS) SUPPLIED AND INSTALLED BY GEHC.
17. RELOCATE EXISTING MOBILE MRI DATA AND PHONE OUTLETS FOR TO THIS LOCATION. PROVIDE NEW DEVICES AS SHOWN. ALL DEVICES SHALL BE MOUNTED AT APPROXIMATELY THE SAME HEIGHT AS THEY PREVIOUSLY WERE.
18. APPROXIMATE LOCATION TO INTERCEPT EXISTING CONDUITS TO MOBILE MRI RECEPTACLE AND ASSOCIATED DEVICES. EC TO PROVIDE ONE PULLBOX FOR POWER AND ANOTHER FOR DATA. EXTEND TO NEW LOCATION AS SHOWN. EC TO FIELD VERIFY EXISTING CONDITIONS TO DETERMINE TOTAL NUMBER OF CONDUITS, CIRCUITS, AND SIZE OR WIRE.

NORTH

T-101 | FLOOR PLAN - TELECOM
SCALE: 3/16" = 1'-0"

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FLOOR PLAN - TELECOM

PROJECT NUMBER	24107
DATED	03/28/2025

T-101

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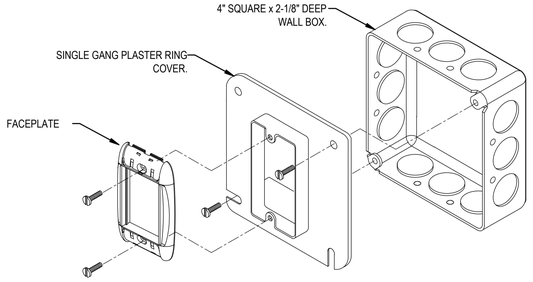
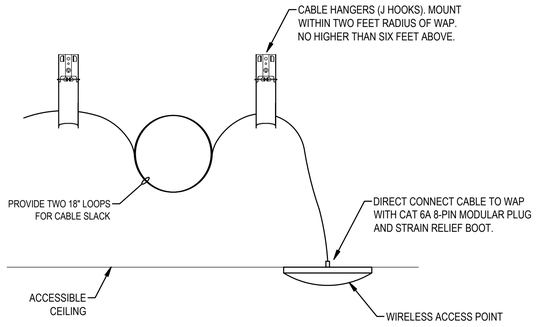
24110 Job No.



TYPICAL FLUSH MOUNT COMMUNICATIONS OUTLET DETAIL

NTS



WIRELESS ACCESS POINT MOUNTING DETAIL

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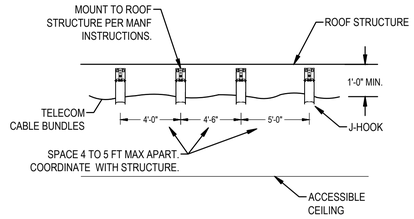
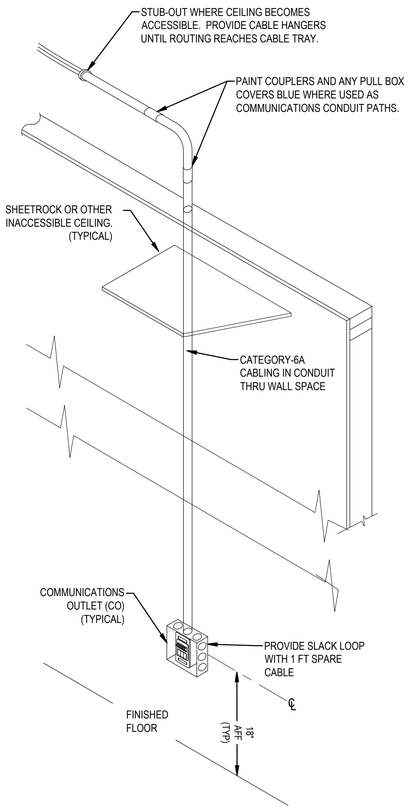


CABLE ROUTING NOTES

1. ROUTE PERPENDICULAR & PARALLEL TO BUILDING LINES.
2. BUNDLE CABLES WITH PANDUIT PAN-TY PRT4S-C WITH RELEASABLE LOOP AT EACH HANGER.
3. HANGERS FOR CABLES SHALL BE J-HOOKS EQUAL TO ERICO CADDY CAT 32 HP. COLOR SHALL BE BLUE.
4. MAXIMUM NUMBER OF CABLES OR BUNDLE SIZE IS 25 FOR CAT 6A AND 40 FOR CAT 5 OR 6.
5. EACH CATEGORY OF CABLE SHALL BE BUNDLED TOGETHER WITH LIKE CABLE, SEPARATE FROM OTHER CATEGORIES OF CABLING. I.E. DON'T BUNDLE CAT 6 WITH CAT 6A.

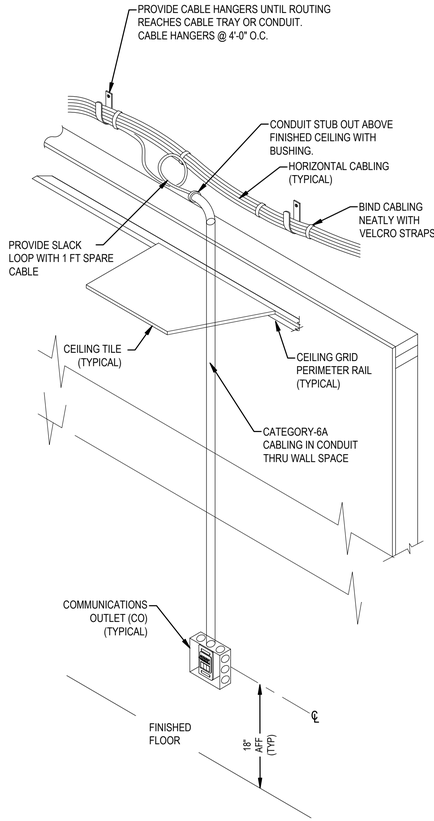
CABLE ROUTING DETAIL

NOT TO SCALE



COMMUNICATIONS OUTLET INSTALLATION DETAIL AT INACCESSIBLE CEILING LOCATIONS

NTS



COMMUNICATIONS OUTLET INSTALLATION DETAIL AT ACCESSIBLE CEILING LOCATIONS

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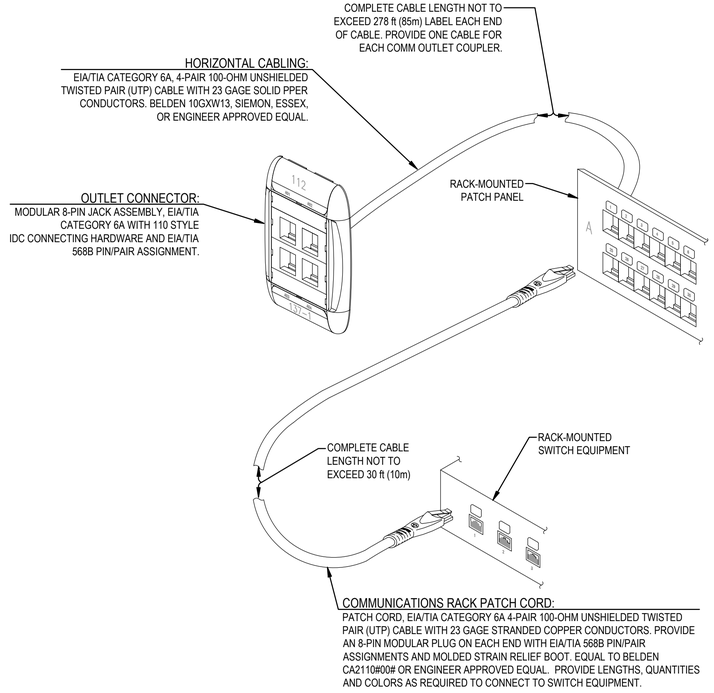

COMMUNICATIONS CABLING DETAIL

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REVISIONS:

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TELECOM DETAILS

PROJECT NUMBER	24107
DATED	03/28/2025

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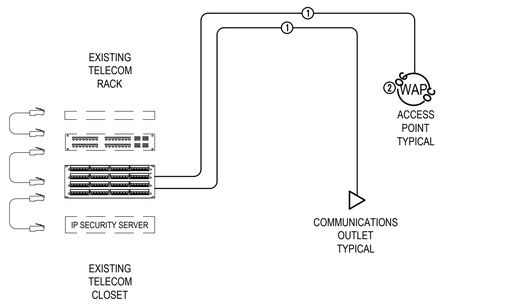
24110 Job No.

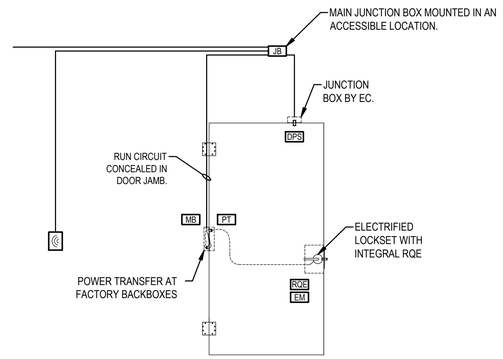
DATA SYSTEM NOTES:

1. HORIZONTAL WIRING CABLES. CATEGORY 6A, FOUR-PAIR 100-OHM UNSHIELDED TWISTED PAIR (UTP) CABLE WITH 24 AWG SOLID PAIR CONDUCTORS. MAXIMUM LENGTH 90 METERS (295'). CABLE COLOR SHALL BE BLUE FOR DATA AND GRAY FOR ACCESS POINTS. TERMINATE CABLES AT PATCH PANEL.
2. OFOI ACCESS POINT.



TELCOM CABLING RISER DIAGRAM

NOT TO SCALE



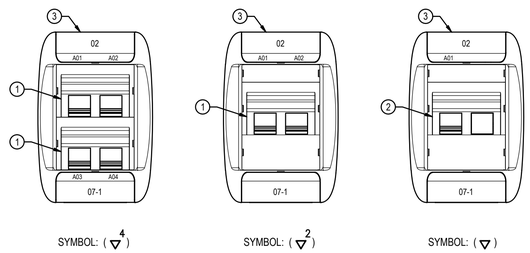
SECURE SINGLE DOOR WITH LOCKSET

NOT TO SCALE

EXISTING PATCH PANEL		Number of Ports:	N/A	Coupler Style:	SINGLE
		EIA/TIA Category Rating:	6a	Mounting:	N/A
		Options:	BLUE - DATA; GRAY - WAP; GRN - CAM; Y - CA		
Location Served		Number of Terminations	Room No. Designation	Physical Port Numbers	
Room No.	Room Name				
A101	CONTROL ROOM	14	A101 .1 - 14	1 - 14	
A102	EQUIPMENT ROOM	10	A102 .1 - 10	15 - 24	
A105	MECHANICAL ROOM	2	A105 .1 - 2	25 - 26	
Patch Panel Addition Totals:		26			

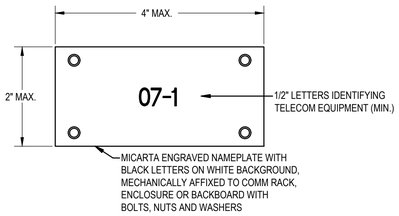
OUTLET DETAIL NOTES:

1. CATEGORY 6A, 2-PORT ANGLED DATA COUPLER, EQUAL TO BELDEN AX102413 INSERT WITH (2) 8P CAT 6A MODULAR JACKS, EQUAL TO BELDEN REVCONNECT RV6MJKUEW, COLOR ELECTRIC WHITE
2. CATEGORY 6A, 2-PORT ANGLED DATA COUPLER, BELDEN AX102413 INSERT WITH (1) 8P CAT 6A MODULAR JACKS, BELDEN REVCONNECT RV6MJKUEW AND ONE BLANK COVER, COLOR ELECTRIC WHITE
3. FACEPLATE EQUAL TO BELDEN AX101747. COLOR ELECTRIC WHITE ELSEWHERE, PROVIDE (1) BELDEN AX101759 FILLER AND (1) BELDEN AX1011763 FILLER.



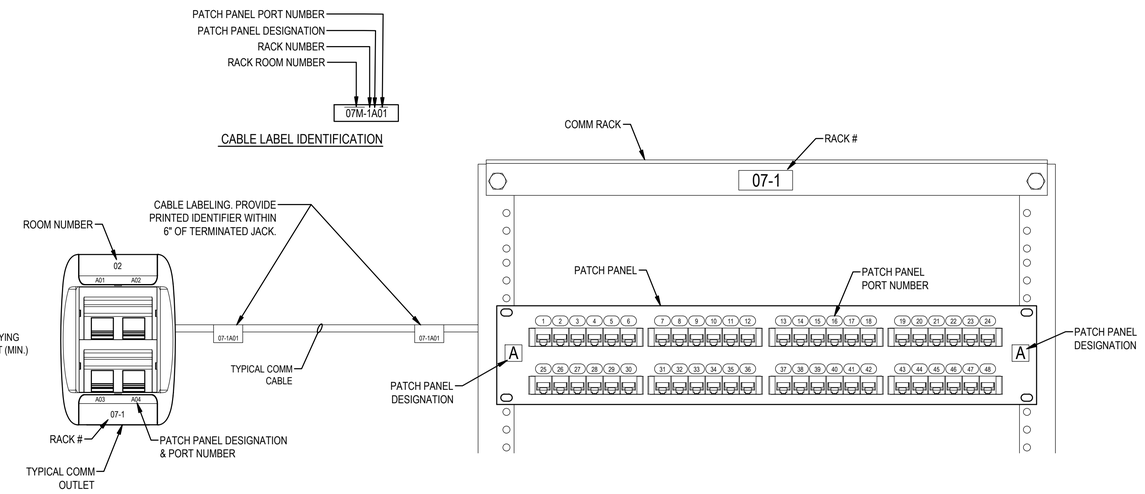
OUTLET CONFIGURATION DETAIL

NOT TO SCALE



TYPICAL TELECOM EQUIPMENT NAMEPLATE

NOT TO SCALE



COMM OUTLET TO PATCH PANEL LABELING NOMENCLATURE

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24110 Job No.

REV	DATE	MODIFICATIONS
A	14/Mar/2025	Final (DC-468559)

01 - C1 - Cover Sheet
02 - C2 - Disclaimer - Site Readiness
03 - A1 - General Notes
04 - A2 - Equipment Layout
05 - A3 - Section Views
06 - A4 - Acoustic - Proximity Limits
07 - A5 - RF shielding
08 - A6 - Equipment Details (1)
09 - A7 - Equipment Details (2)
10 - A8 - Delivery
11 - S1 - Structural Notes
12 - S2 - Structural Layout
13 - S3 - Structural Details
14 - M1 - Mechanical Layout
15 - M2 - HVAC-Venting
16 - M3 - Chilled Water
17 - M4 - Cryogenics (1)
18 - M5 - Cryogenics (2)
19 - E1 - Electrical Notes (1)
20 - E2 - Electrical Notes (2)
21 - E3 - Electrical Layout
22 - E4 - Electrical Elevations
23 - E5 - Electrical Details
24 - E6 - Electrical Details (2)
25 - E7 - Power Requirements - Power Distribution
26 - E8 - Facility Supplied Wiring
27 - E9 - Interconnections

A mandatory component of this drawing set is the GE HealthCare Pre Installation manual. Failure to reference the Pre Installation manual will result in incomplete documentation required for site design and preparation.
Pre Installation documents for GE HealthCare products can be accessed on the web at: *https://www.gehealthcare.com/support/manuals*

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SIGNA ARTIST
FINAL STUDY

Drawn by	Verified by	Concession	GON/Quote	PIM Manual	Rev
AKD	AKD	-	2009910191.7	5670001	18

Format	Scale	File Name	Date	Sheet
A3	1/4"=1'-0"	MRI-M433758-FIN-00-A.DWG	14/Mar/2025	01/27

DISCLAIMER

GENERAL SPECIFICATIONS

- GE is not responsible for the installation of developers and associated equipment, lighting, cassette trays and protective screens or derivatives not mentioned in the order.
- The final study contains recommendations for the location of GE equipment and associated devices, electrical wiring and room arrangements. When preparing the study, every effort has been made to consider every aspect of the actual equipment expected to be installed.
- The layout of the equipment offered by GE, the dimensions given for the premises, the details provided for the pre-installation work and electrical power supply are given according to the information noted during on-site study and the wishes expressed by the customer.
- The room dimensions used to create the equipment layout may originate from a previous layout and may not be accurate as they may not have been verified on site. GE cannot take any responsibility for errors due to lack of information.
- Dimensions apply to finished surfaces of the room.
- Actual configuration may differ from options presented in some typical views or tables.
- If this set of final drawings has been approved by the customer, any subsequent modification of the site must be subject to further investigation by GE about the feasibility of installing the equipment. Any reservations must be noted.
- The equipment layout indicates the placement and interconnection of the indicated equipment components. There may be local requirements that could impact the placement of these components. It remains the customer's responsibility to ensure that the site and final equipment placement complies with all applicable local requirements.
- All work required to install GE equipment must be carried out in compliance with the building regulations and the safety standards of legal force in the country concerned.
- These drawings are not to be used for actual construction purposes. The company cannot take responsibility for any damage resulting therefrom.

CUSTOMER RESPONSIBILITIES

- It is the responsibility of the customer to prepare the site in accordance with the specifications stated in the final study. A detailed site readiness checklist is provided by GE. It is the responsibility of the customer to ensure all requirements are fulfilled and that the site conforms to all specifications defined in the checklist and final study. The GE Project Manager of Installation (PMI) will work in cooperation with the customer to follow up and ensure that actions in the checklist are complete, and if necessary, will aid in the rescheduling of the delivery and installation date.
- Prior to installation, a structural engineer of record must ensure that the floor and ceiling is designed in such a way that the loads of the installed system can be securely borne and transferred. The layout of additional structural elements, dimensioning and the selection of appropriate installation methods are the sole responsibility of the structural engineer. Execution of load bearing structures supporting equipment on the ceiling, floor or walls are the customer's responsibility.

THE UNDERSIGNED, HEREBY CERTIFIES THAT I HAVE READ AND APPROVED THE PLANS IN THIS DOCUMENT.		
DATE	**NAME**	**SIGNATURE**

CUSTOMER SITE READINESS REQUIREMENTS

REQUIRED MANUALS FOR SYSTEM PRE-INSTALLATION	
Description	**Document Number***
Product specific Pre-installation Manual	Refer to cover page
Magnet Room Venting	5850263
RF Shielded Room Pre-installation Requirements for MR systems	5850260
IEC Electromagnetic Compatibility	5850261
Acoustic Room Details	5850262
Magnet Venting Conformance Assessment Form	2705036
*documents can be accessed in multiple languages at *https://www.gehealthcare.com/support/manuals*	

- A mandatory component of this drawing set is the GE HealthCare Pre-installation manual. Failure to reference the Pre-installation manual will result in incomplete documentation required for site design and preparation.
- The items on the GE HealthCare Site Readiness Checklist **DOC2949060** and Worksheet **DOC2949068** are REQUIRED to facilitate equipment delivery to the site. Equipment will not be delivered if these requirements are not satisfied.
  - Any deviation from these drawings must be communicated in writing to and reviewed by your local GE HealthCare installation project manager prior to making changes.
  - Make arrangements for any rigging, special handling, or facility modifications that must be made to deliver the equipment to the installation site. If desired, your local GE HealthCare installation project manager can supply a reference list of rigging contractors.
  - New construction requires the following;
    1. Secure area for equipment,
    2. Power for drills and other test equipment,
    3. Restrooms.
  - Provide for refuse removal and disposal (e.g. crates, cartons, packing)
  - It is required to minimize vibrations within the scan room. It is the customer's responsibility to contract a vibration consultant/engineer to implement site design modifications to meet the GE vibration specification. Refer to the system Pre-installation manual for vibration specifications.

MRI SITE PLANNING REMINDERS

Please refer to pre-installation checklist in pre-installation manual listed on the cover sheet for items critical to image quality.

1. The layout should be arranged so that the 5g line is contained to the magnet room. If not possible, a barrier is recommended to prevent entry to the 5g field area.
2. The spaces around, above, and below the magnet must be reviewed for effects of the 5g, 3g, 1g, and .5g fields. Refer to the proximity limit chart in the MR pre-installation manual referenced on the cover sheet.
3. For moving metal, the restriction lines typically extend outside of the MR space. Please confirm there are no moving metal concerns within these areas.
4. For vibration, analysis to be completed as required per pre-installation manual.
5. For EMI, review the site for the location of the main electrical feeders, AC devices, or distribution systems. An EMI study is recommended if large AC systems are nearby.
6. Details of the floor below the magnet must be reviewed. The structural engineer must verify that the quantity of steel in the volume 10ft [3.1m] x 10ft [3.1m] x 13in [.3m] deep (below the magnet) does not exceed the allowable steel content as given in the MR pre-installation manual referenced on the cover sheet.
7. Remove, cover, or fill-in abandoned ducts or troughs from the Equipment and Magnet rooms. Access/computer room flooring in the Equipment room can either be removed or assessed and reinforced to support heavier cabinets.

Responsibility for the coordination, design, engineering, and site preparation resides with the customer and their project architects and contractors. GE does not, by providing reviews and furnishing comments and assistance, accept any responsibility beyond its obligations as defined in the MR system, sale/purchase agreement.

IMAGE QUALITY CONSIDERATIONS

Broadband RF noise is a single transient or continuous series of transient disturbances caused by an electrical discharge. Low humidity environmental conditions will have higher probability of electrical discharge. The electrical discharge can occur due to electrical arcing (micro arcing) or merely static discharge. Some potential sources capable of producing electrical discharge include:

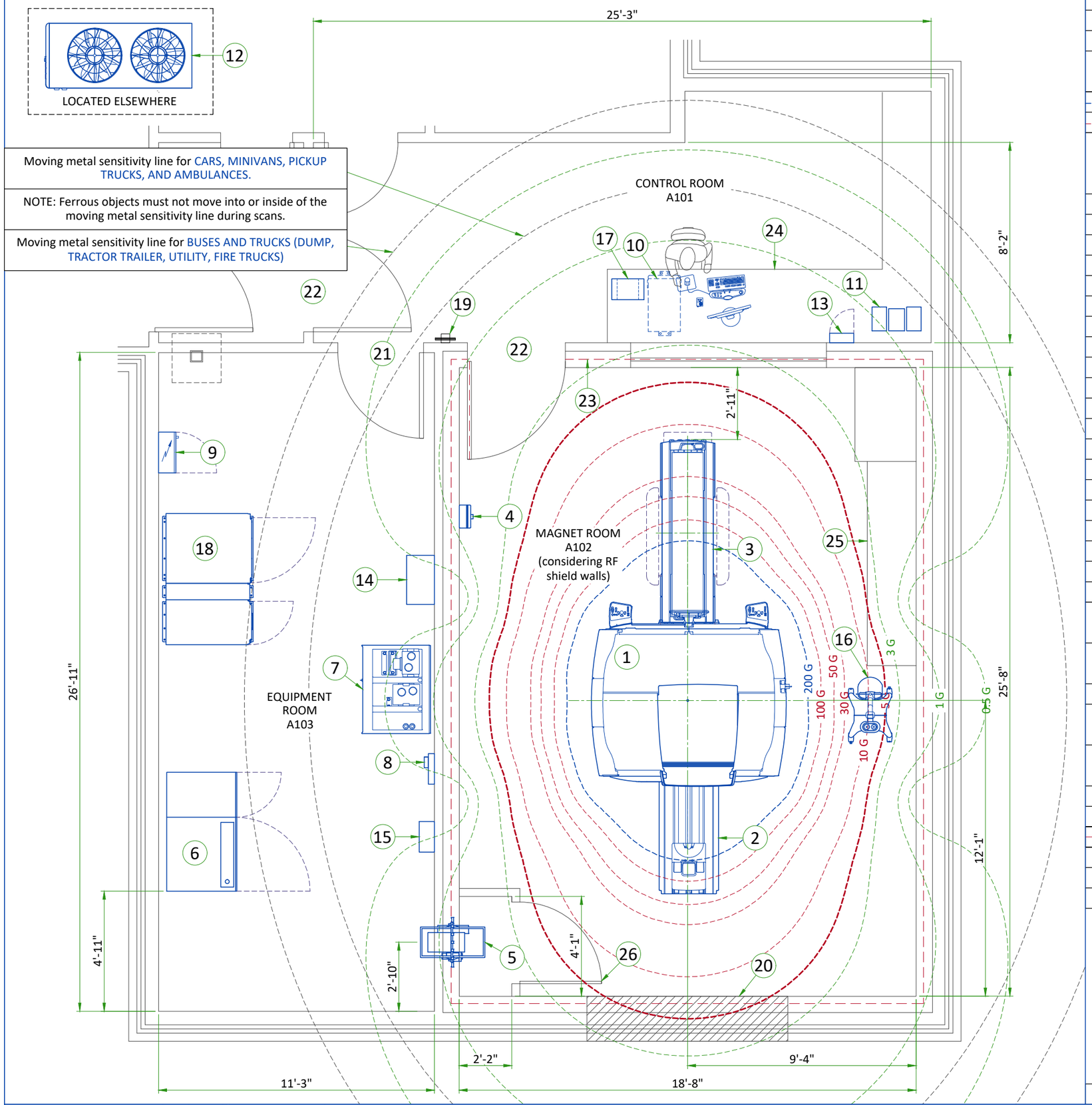
- Loose hardware/fasteners vibration or movement (electrical continuity must always be maintained)
- Flooring material including raised access flooring (panels & support hardware) and carpeting
- Electrical fixtures (i.e. Lighting fixtures, track lighting, emergency lighting, battery chargers, outlets)
- Ducting for HVAC and cable routing
- RF shield seals (walls, doors, windows etc.)

For additional information regarding image quality, refer to the pre-installation manual listed on the cover sheet.

MAGNETIC INTERFERENCE SPECIFICATIONS

- The customer must establish protocols to prevent persons with cardiac pacemakers, neurostimulators, and biostimulation devices from entering magnetic fields of greater than 5 gauss (exclusion zone).
- Main power transformers must remain outside the 3 gauss field. EMI < 40mG RMS AC at the magnet location. EMI <9.39mG DC.
- Potential exists under fault conditions that the 5 gauss line may expand radially to 11.48 ft. [3.5 m] and axially to 14.76 ft. [4.5 m] for 1 second or less. It should be noted that normal rampdowns or magnet rundown unit initiated quenches will not cause the magnetic field to expand.
- It is recommended every site consider the event of a quench and plan accordingly (such as placing 5 gauss warning signs at expanded locations).
- The ferrous metal objects listed below must not move into or inside of the moving metal sensitivity line during scans.

TYPCIAL MOVING MAGNETIC MASS	DISTANCE RADIALLY		DISTANCE AXIALLY	
Carts, Gurneys 100-400 lbs [45-182 kg]	3 Gauss line		3 Gauss line	
Forklifts, small elevator, cars, minivans vans, pickup trucks, ambulances (objects greater than 400 lbs [182 kg])	15.5 FT	4.72 M	21.0 FT	6.4 M
Buses and trucks (dump, tractor trailer, utility, fire trucks)	18.1 FT	5.52 M	24.5 FT	7.47 M



LEGEND

A	GE SUPPLIED	D	AVAILABLE FROM GE
B	GE SUPPLIED/CONTRACTOR INSTALLED	E	EQUIPMENT EXISTING IN ROOM
C	CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED	*	ITEM TO BE REINSTALLED FROM ANOTHER SITE
	200 GAUSS		5 GAUSS
	100, 50, 30, 10 GAUSS		3, 1, 0.5 GAUSS

BY	ITEM	DESCRIPTION	MAX HEAT OUTPUT (BTU/h)	WEIGHT (lbs)	MAX HEAT OUTPUT (W)	WEIGHT (kg)
A	1	MAGNET (MAG) (IPM)	8189	10264	2400	4655
A	2	REAR PEDESTAL (PED)	-	212	-	96
A	3	PATIENT TABLE (PT)	-	463	-	210
A	4	MAGNET RUNDOWN UNIT (MRU)	-	7	-	3.2
A	5	PENETRATION PANEL (PP)	-	-	-	-
A	6	POWER, GRADIENT, RF CABINET (PGR)	32421	3274	9502	1485
A	7	INTEGRATED COOLING CABINET	5118	1632	1500	740
A	8	MAGNET MONITOR (MON)	819	8	240	3.6
B	9	MAIN DISCONNECT PANEL (MDP)	901	126	264	57
A	10	OPERATOR CONSOLE (GOC)	4947	121	1450	55
A	11	MUSIC SYSTEM	-	-	-	-
B	12	CBOXX 100 CHILLER	-	2822	-	1280
B	13	REMOTE CONTROL PANEL	-	-	-	-
B	14	CHILLER INTERFACE PANEL	-	170	-	77
D	15	INJECTOR POWER SUPPLY	601	7	176	3
D	16	INJECTOR HEAD ON PEDESTAL	-	95	-	43
D	17	INJECTOR CONTROL	676	18	198	8
B	18	FULL UPS 100kVA	11399	5085	3341	2306
D	19	METAL DETECTOR (HAND HELD)	-	-	-	-
C	20	MAGNET ACCESS 2.5m x 2.5m [98.5in x 98.5in]				
C	21	MINIMUM OPENING FOR EQUIPMENT DELIVERY IS 1016 mm x 2083 mm [40 in x 82 in], CONTINGENT ON A 1829 mm [72 in] CORRIDOR WIDTH				
C	22	MINIMUM OPENING FOR EQUIPMENT DELIVERY IS 1092 mm x 2083 mm [43 in x 82 in], CONTINGENT ON A 2438 mm [96 in] CORRIDOR WIDTH				
C	23	DEFINE RF SHIELD'S INSET ACCORDING TO PROVISIONS MADE BY THE RF SHIELD VENDOR				
C	24	COUNTER TOP FOR EQUIPMENT- PROVIDE GROMMETED OPENINGS AS REQUIRED TO ROUTE CABLES				
C	25	BASE CABINET FOR STORAGE OF: SURFACE COILS, PATIENT POSITIONING PADS, PHANTOMS, ETC.				
C	26	LOUVERED DOOR - REFER TO PREINSTALL MANUAL FOR REQUIREMENTS				

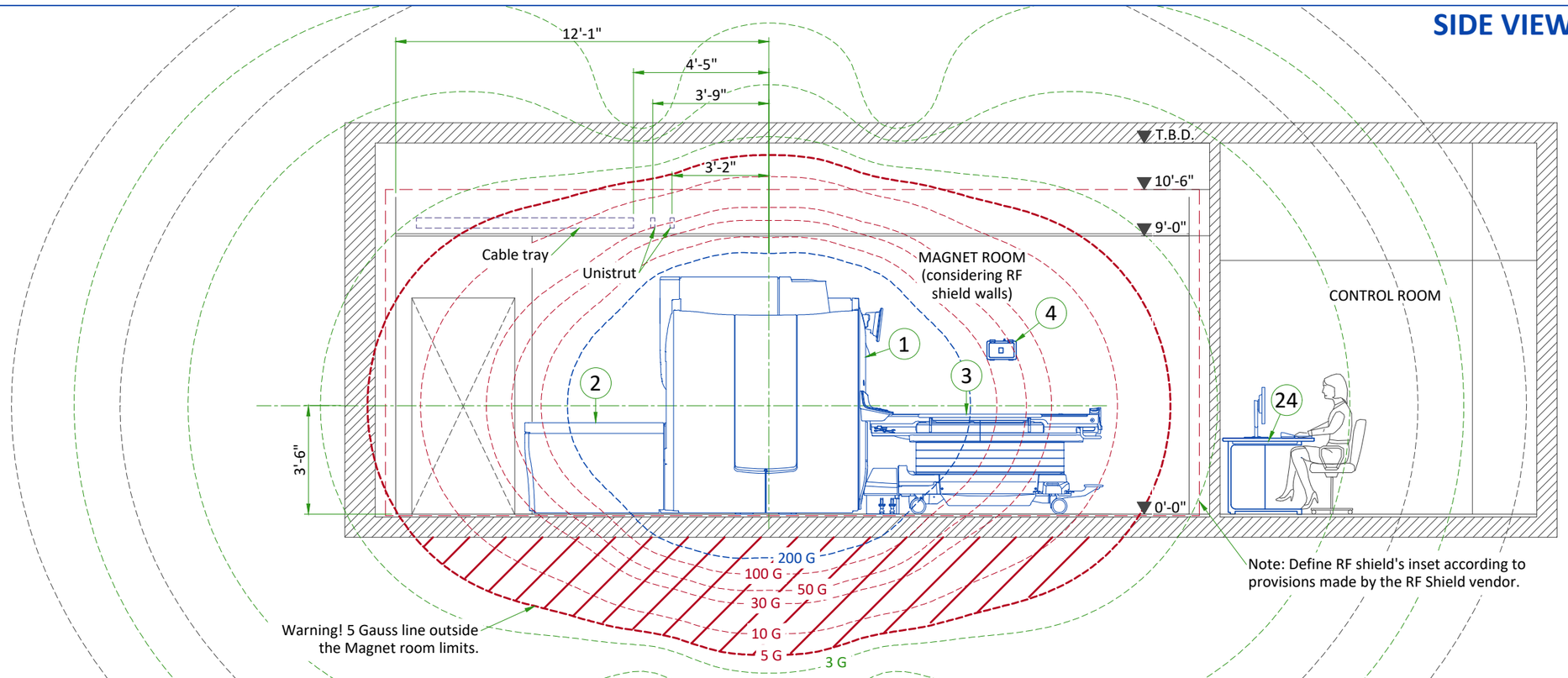
RF SHIELD - 100 dB ATTENUATION

EXAM ROOM HEIGHT

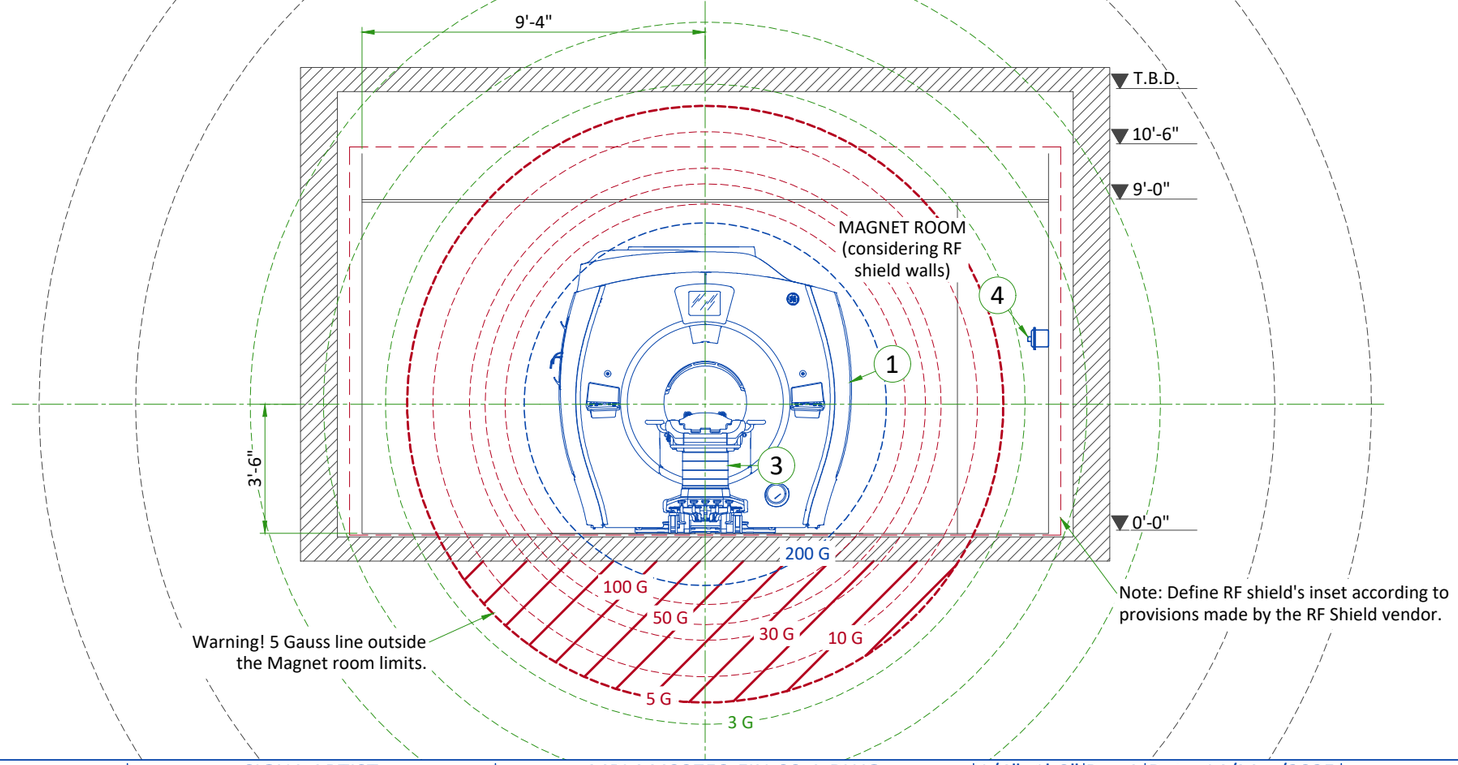
FINISHED FLOOR TO SLAB HEIGHT	TBD
FALSE CEILING HEIGHT	9'-0"

For Accessory Sales: (866) 281-7545 Options 1, 2, 1, 2 or mail to: gehcaccessorysales@ge.com

SIDE VIEW WITH MAGNETIC FIELD



FRONT VIEW WITH MAGNETIC FIELD



ACOUSTICS SPECIFICATIONS

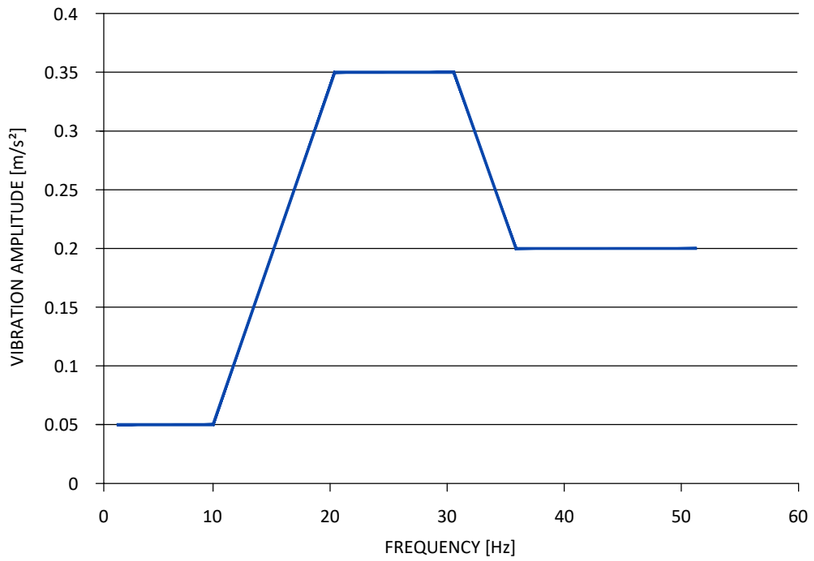
Acoustic and vibroacoustic information is provided for site planning and architectural design activities. It is the customer's responsibility to hire a qualified acoustic engineer for solutions to further attenuate this transmitted noise and vibration, if required. The actual room noise level may vary based on room design, optional equipment, and usage:

Control Room: 62dBA
Equipment Room: 80dBA
Magnet Room: 122dBA*
(maximum sound pressure level at magnet bore isocenter)

* Frequency: 20 Hz to 20kHz

FREQUENCY (Hz)	AMPLITUDE (m/s^2)
2	0.05
10	0.05
20	0.35
30	0.35
35	0.2
50	0.2

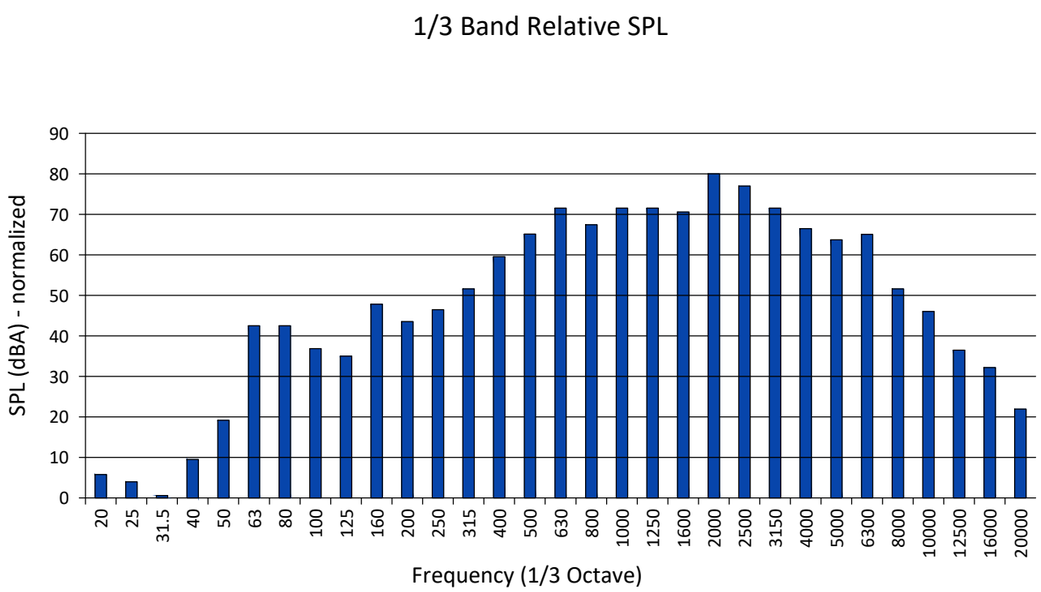
Low Frequency Magnet Floor Vibration (Vibration Amplitude at Each Foot)



ISOGAUSS PLOTS

* The isogauss contour plots depicted on this drawing represent magnetic fringe fields resulting from the normal operation of the magnet provided with the MR system. The actual magnetic field intensity at any point in the vicinity of the magnet when installed may vary from the contour plots due to factors such as the concentrating effects of nearby ferrous objects ambient magnetic fields, including the earth's magnetic field. Therefore, the contours shown are only approximations of actual field intensities found at a corresponding distance from the magnet's isocenter.

SOUND PRESSURE SPECTRAL DISTRIBUTION



MAGNETIC PROXIMITY LIMITS

Gauss (mT) Limit	Equipment
0.5 gauss (0.05mT)	Nuclear camera
1 gauss (0.1mT)	Positron Emission Tomography scanner, Linear Accelerator, Cyclotrons, Accurate measuring scale, Analog image intensifiers, Bone Densitometers, Video display (tube), CT scanner, Ultrasound, Lithotriptor, Electron microscope
3 gauss (0.3mT)	Power transformers, Main electrical distribution transformers
5 gauss (0.5mT)	Cardiac pacemakers, Neurostimulators, Biostimulation devices
10 gauss (1mT)	Magnetic computer media, Line printers, VCRs, Film processor, X-ray tubes, Emergency generators, Commercial laundry equipment, Food preparation area, Water cooling equipment, HVAC equipment, Major mechanical equipment room, Credit cards, watches, and clocks, Air conditioning equipment, Fuel storage tanks, Motors greater than 5 horsepower
50 gauss (5mT)	Metal detector for screening, LCD panels, Telephones
No Limit	Digital Detectors

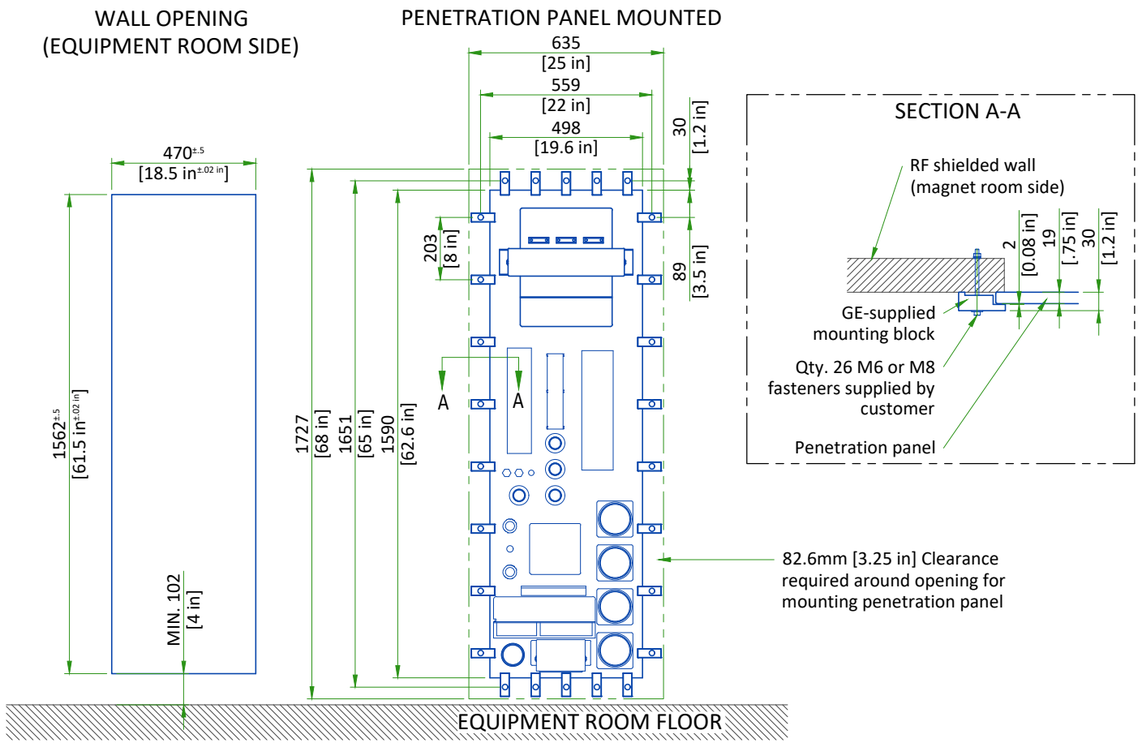
The customer must provide detail defining ferrous material below the magnet to the Project Manager so the GE Healthcare MR Siting and Shielding team can review for compliance.

STEEL MASS LIMITS TO MAGNET ISOCENTER (3x3 m [10x10 ft] AREA UNDER MAGNET)

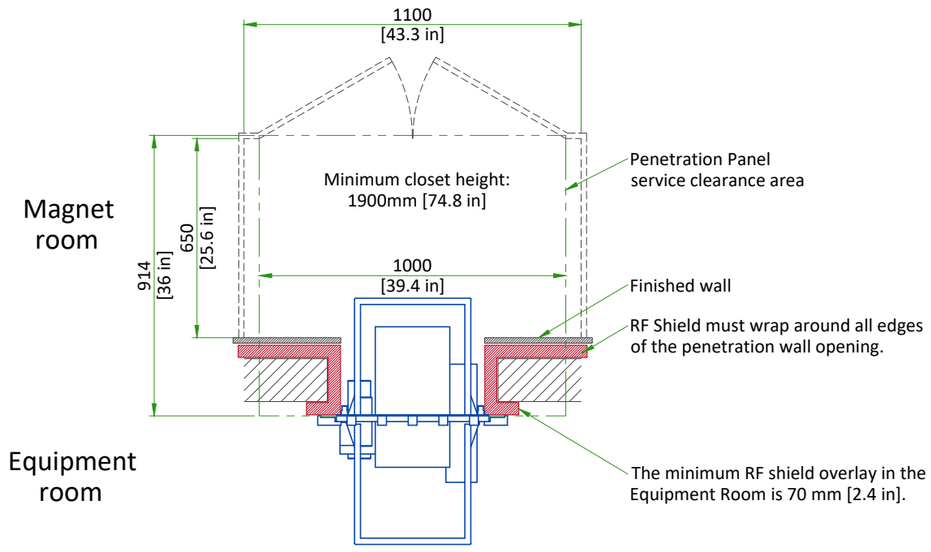
Limits Of Steel Mass		Distance Below Top Surface Of Floor	
kg/m^2	lbs/ft^2	mm	in
0	0	0 - 76	0-3
9.8	2	76 - 127	3-5
14.7	3	127 - 254	5-10
39.2	8	254 - 330	10-13
98.0	20	330+	13+

The actual field strength can be affected by Magnetic shielding, Earth's magnetic field, other magnetic fields and stationary or moving metal. This information must be used to evaluate potential site interaction of GE Healthcare equipment with other non-GE Healthcare equipment. Magnetic shielding can be installed to prevent interaction between the magnet and nearby sensitive devices. The GE Healthcare Project Manager of Installation (PMI) can work with the customer to coordinate the magnetic shielding site evaluation. The customer is responsible for installation of all magnetic shielding.

PENETRATION PANEL WALL OPENING



PENETRATION PANEL PLAN VIEW



If the closet depth is less than 1000mm [39.4 in], the closet must have door(s) configured to clear the service area for the Penetration Panel.

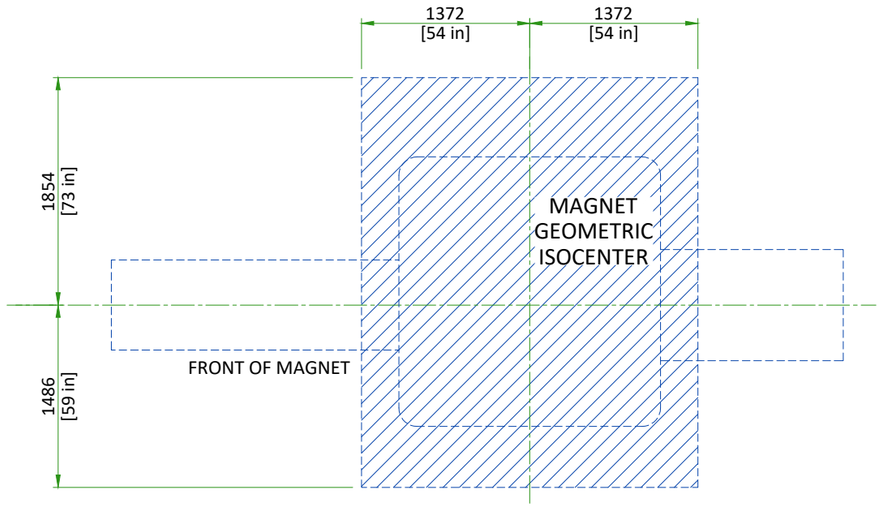
PENETRATION PANEL CLOSET

An enclosure (i.e. closet) must be provided to restrict access to the PEN panels and for storage of excess interconnections.

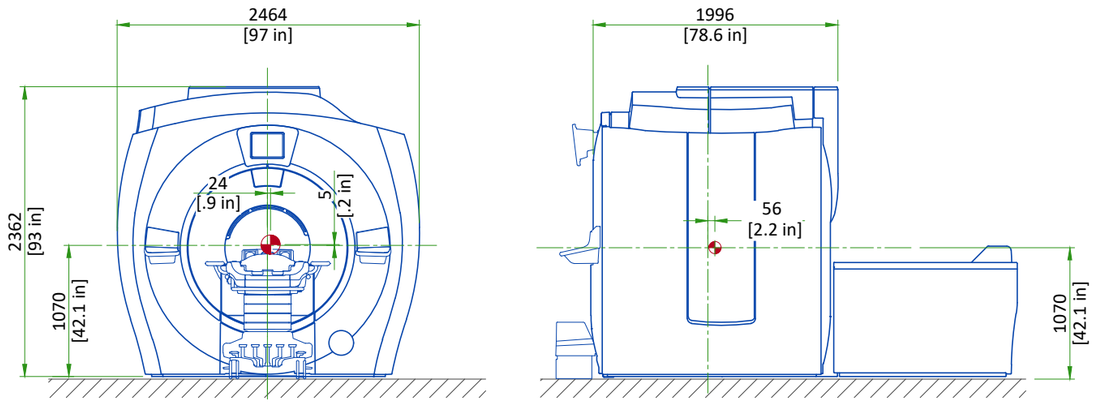
- The PEN closet must have a mechanical locking mechanism to restrict access to the PEN panels
- The PEN closet must maintain the minimum service area outside the 200 Gauss in the magnet room.
- PEN closet must allow free air exchange of **400CFM (680 m³/hour)** between the Magnet room and PEN closet for MR system blowers. Airflow may be achieved through door louvers or other openings in the PEN closet that meet all other PEN closet requirements

MINIMUM MAGNET CEILING HEIGHT (TOP VIEW)

If the ceiling height is between 2500 mm (98.5 in.) and 2667 mm (105 in.), the flexible main lead extension for low ceiling height (2.5M Low Ceiling Kit-Passive, M7000GM) is required for ramping the magnet. Contact the GEHC PMI and GEHC Service Field Engineer for further evaluation.

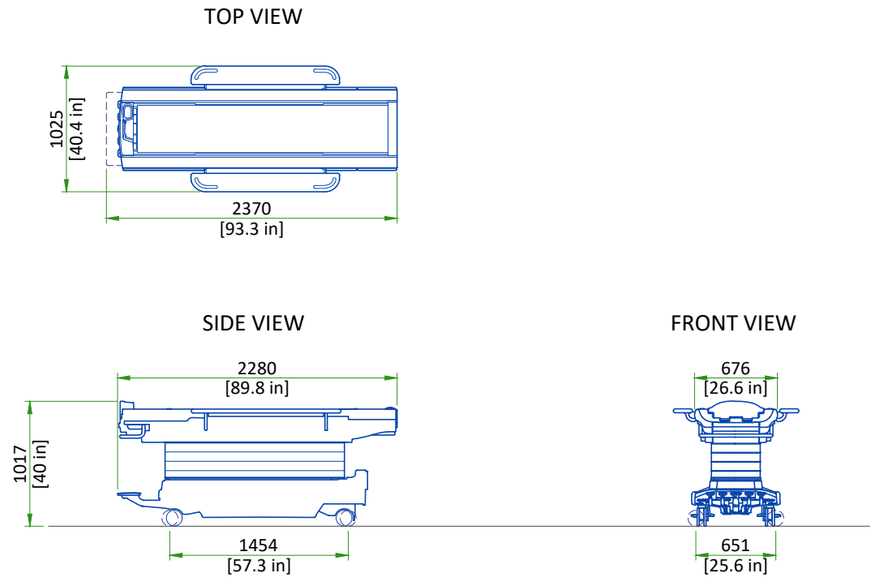


MAGNET ENCLOSURE



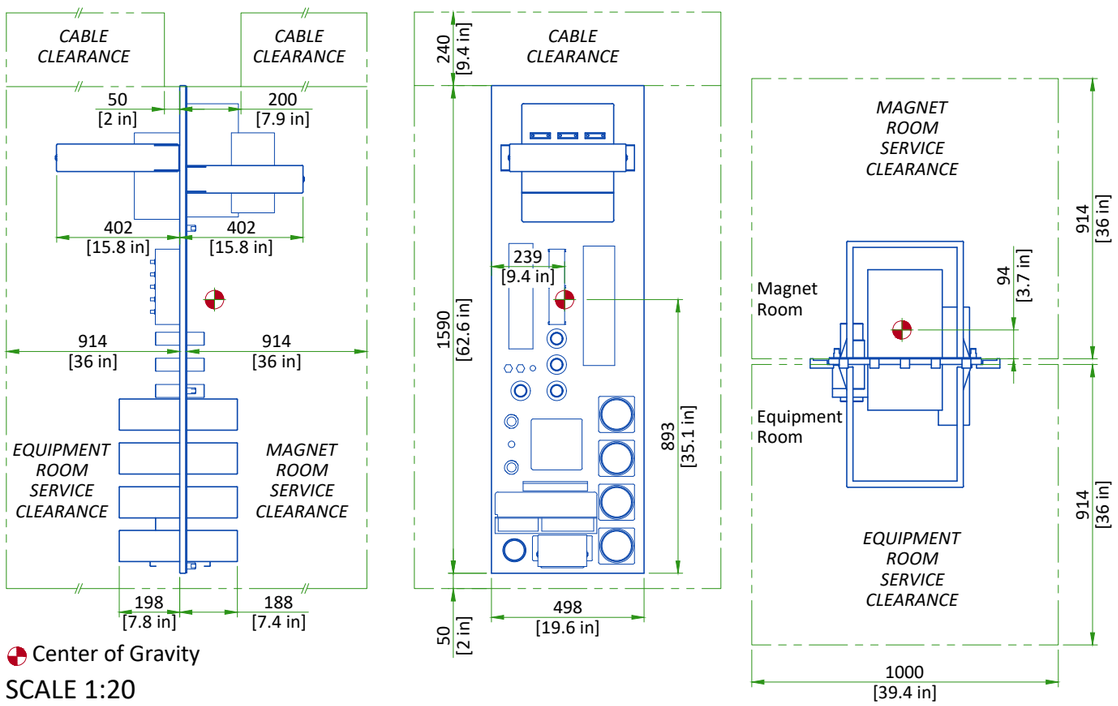
Note:
Center of gravity is approximate and includes the GE Healthcare supplied VibroAcoustic Dampening Kit, but does not include cryogens, gradient assembly, side mounted electronics, or enclosures.
Enclosure dimensions are for reference only, NOT FOR SITE PLANNING USE.
Center of gravity

PATIENT TRANSPORT TABLE (PT)



SCALE 1:50

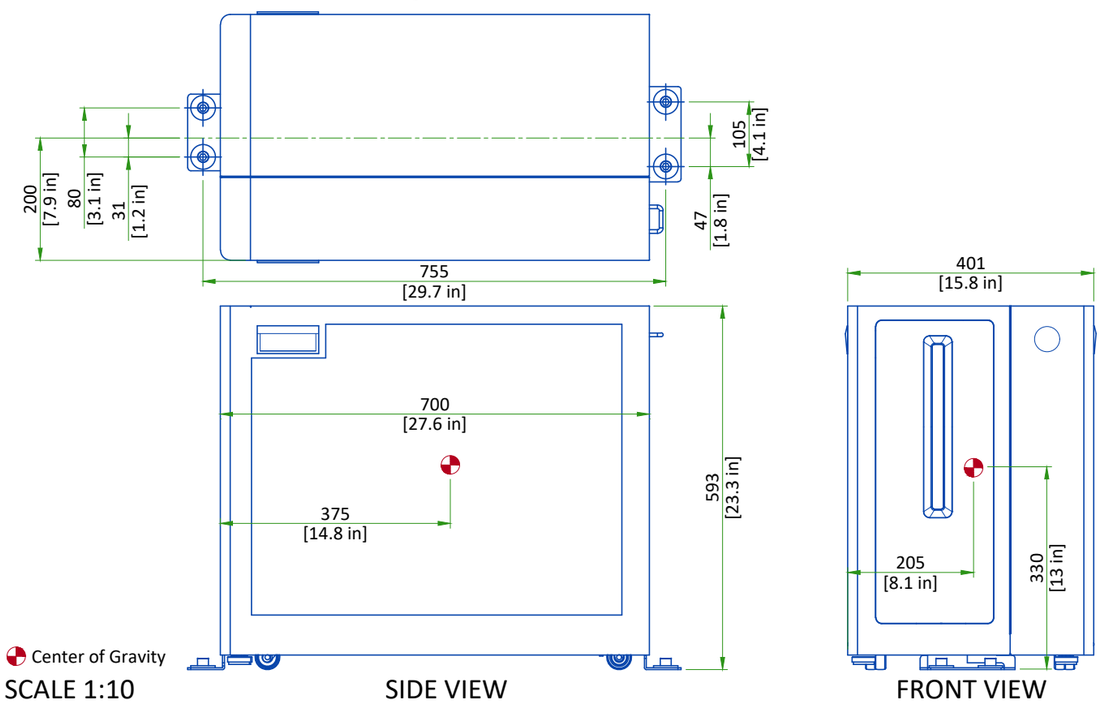
PENETRATION PANEL



Center of Gravity

SCALE 1:20

GLOBAL OPERATORS CABINET (GOC)



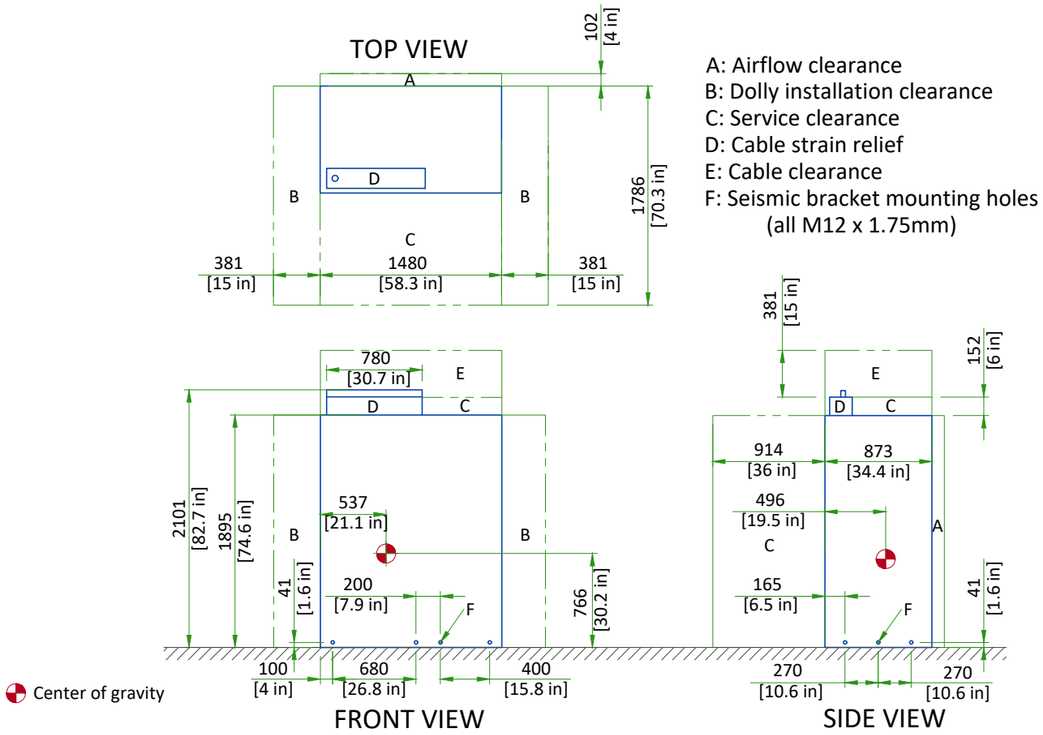
Center of Gravity

SCALE 1:10

SIDE VIEW

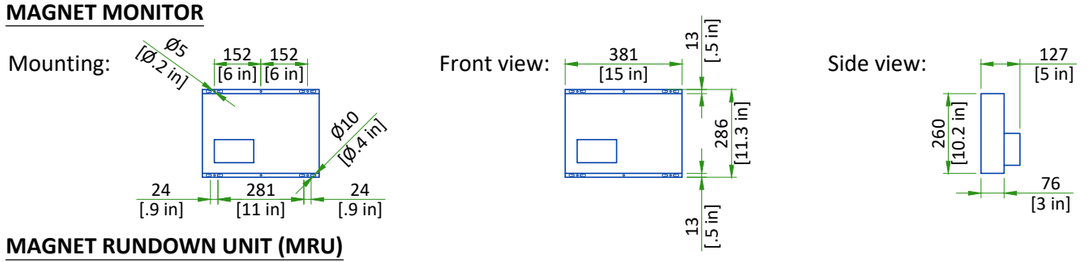
FRONT VIEW

POWER, GRADIENT, RF CABINET (PGR)

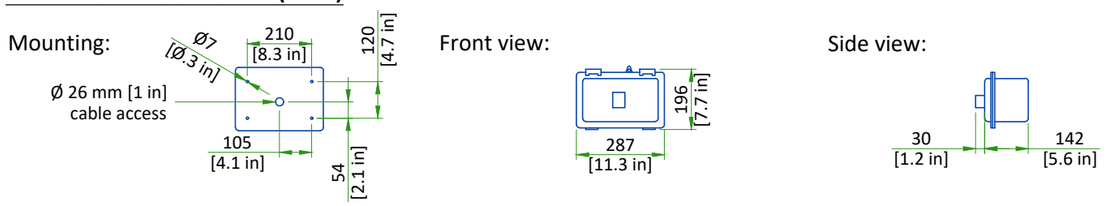


MAGNET MONITOR AND MAGNET RUNDOWN UNIT (MRU)

MAGNET MONITOR



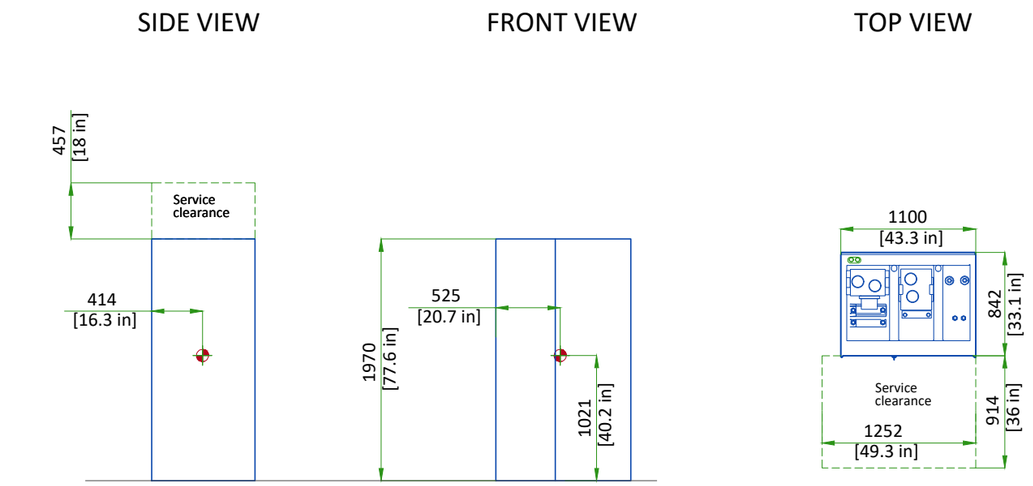
MAGNET RUNDOWN UNIT (MRU)



The bottom edge of the MRU must be mounted 1524 ±25 mm [60 ± 1 in] above the magnet room floor.

SCALE 1:20

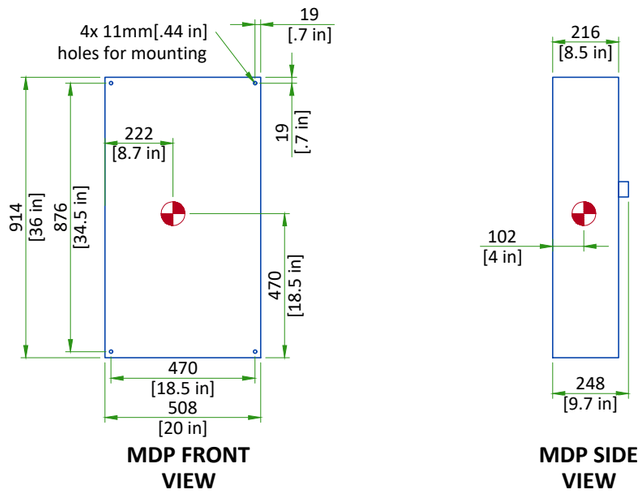
INTEGRATED COOLING CABINET



Center of gravity

NOT TO SCALE

MAIN DISCONNECT PANEL (MDP)



SCALE 1:20

Center of gravity

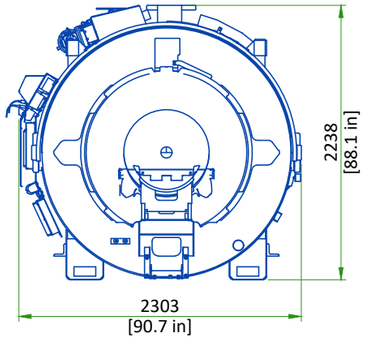
DELIVERY

ROUTING

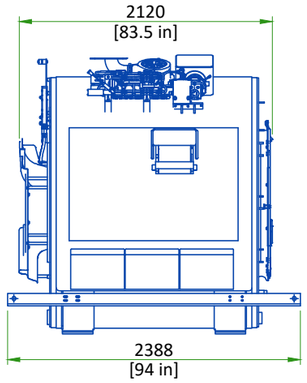
- The customer is solely liable for routing of components from dock to final site.
- GE must be able to move system components in or out with no need to uncrate or disassemble any of the components. The entire passageway must be cleared, adequately lighted and free from dust.
- The floor and it surfacing must be able to withstand the live load of components and handling equipment.
- Floor surfacing must be continuous.
- The customer must protect any fragile flooring surfaces.

SPECIFICATIONS FOR MAGNET ROUTING

- Floor must be able to withstand a moving load of 4823kg [10632 lb]
- Recommended opening height: 2.5m [98.5in], width: 2.5m [98.5in]. If recommended dimensions cannot be met refer to pre-installation manual for detailed specifications.
- Maximum slope: 30°

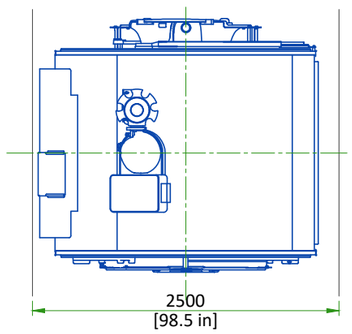


FRONT VIEW OF MAGNET

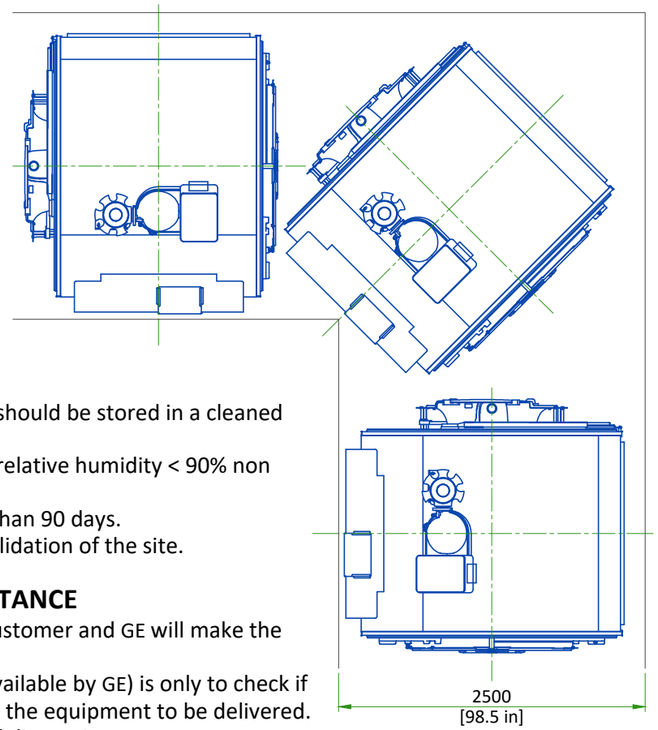


SIDE VIEW OF MAGNET

STRAIGHT PATH



PATH WITH 90 DEGREE TURN



STORAGE CONDITIONS

- System components except the magnet should be stored in a cleaned room:
- Temperature = -30 to 60°C [-22 to 140], relative humidity < 90% non condensing.
- Material should not be stored for more than 90 days.
- The magnet will be delivered after GE validation of the site.

INSTALLATION AND DELIVERY ACCEPTANCE

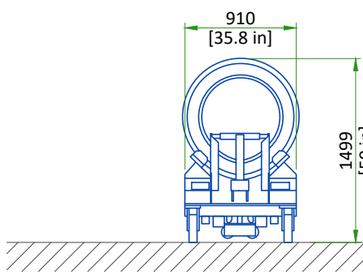
- A survey of the site established by the customer and GE will make the decision for the delivery time.
- This survey of the site (a form is made available by GE) is only to check if the apparent conditions of the site allow the equipment to be delivered.
- If the site is not ready, GE can delay the delivery time.

CRITICAL ITEMS FOR MAGNET DELIVERY

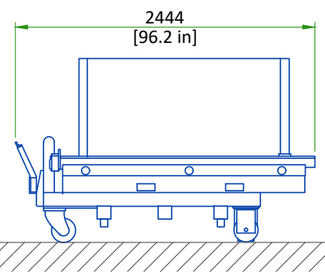
- 24/7 chilled water and three phase power for Cryocooler Compressor. Refer to Power Requirements detail for detailed specifications.
- 24/7 single phase power for the Magnet Monitor. Refer to Power Requirements detail for detailed specifications.
- Ethernet connections for magnet monitoring and phone lines for emergency use. Refer to Connectivity Requirements detail for additional information.
- Operational magnet room exhaust fan. Refer to Magnet Room Venting Requirements detail for detailed specifications.
- The Cryogen Vent system is installed, complete to outside the building and ready for connection to magnet or will be completed by RF cage closure. Connection delay not to exceed 24 Hours.

This is only a partial list of items required for delivery of the magnet. For a complete checklist refer to the Pre-Installation Manual (PIM) referenced on the cover sheet.

GRADIENT COIL REPLACEMENT



Front view of the IRMW Gradient



Side view of the IRMW Gradient

EQUIPMENT	DIMENSIONS LxWxH		WEIGHT		NOTE
	mm	in	kg	lbs	
Replacement IRMW gradient coil assembly on a shipping cradle/cart	910x2444x1499	35.8x96.2x59	1449	3194	Initial gradient coil assembly is shipped installed in the magnet. Shipping/installation cart is used to install re-placement coil assembly only.

The weight bearing structure of the site should support any additional weight of the main replacement parts occurring during maintenance of the magnet, throughout the whole lifecycle of the MR.

STRUCTURAL NOTES

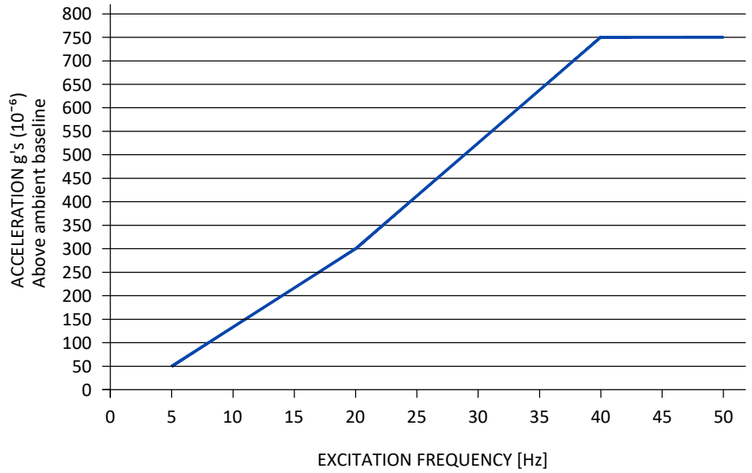
- All units that are wall mounted or wall supported are to be provided with supports where necessary. Wall supports are to be supplied and installed by the customer or his contractors.
- Dimensions are to finished surfaces of room.
- Certain MR procedures require an extremely stable environment to achieve high resolution image quality. Vibration is known to introduce field instabilities into the imaging system. The vibration effects on image quality can be minimized during the initial site planning of the mr suite by minimizing the vibration environment. See PROXIMITY LIMITS, PATIENT TABLE DOCK ANCHOR MOUNTING REQUIREMENTS AND VIBROACOUSTIC DAMPENING KIT details for additional information.
- Standard steel studs, nails, screws, conduit, piping, drains and other hardware are acceptable if properly secured. Any loose steel objects can be violently accelerated into the bore of the magnet. Careful thought should be given to the selection of light fixtures, cabinets, wall decorations, etc. To minimize this potential hazard. For safety, all removable items within the magnet room such as faucet handles, drain covers, switch box cover plates, light fixture components, mounting screws, etc. must be non-magnetic. If you have a specific question about material, bring it to the attention of your GE project manager of installations.
- Floor levelness refer to MAGNET ROOM FLOOR SPECIFICATIONS DETAIL, this floor levelness requirement is important for accurate patient table docking.
- Non-movable steel such as wall studs or hvac components will produce negligible effect on the active shield magnet.
- Customer's contractor must provide all penetrations in post tension floors.
- Customer's contractor must provide and install any non-standard anchoring. Documents for standard anchoring methods are included with GE equipment drawings for geographic areas that require such documentation.
- Customer's contractor must provide and install hardware for "through the floor" anchoring and/or any bracing under access floors. This contractor must also provide floor drilling that cannot be completed because of an obstruction encountered while drilling by the GE installer such as rebar etc.
- Customer's contractor to provide and install appropriate supports for the storage of excess cables.
- It is the customer's responsibility to perform any floor or wall penetrations that may be required. The customer is also responsible for ensuring that no subsurface utilities (e.g., electrical or any other form of wiring, conduits, piping, duct work or structural supports (i.e. post tension cables or rebar)) will interfere or come in contact with subsurface penetration operations (e.g. drilling and installation of anchors/screws) performed during the installation process. To ensure worker safety, GE installers will perform surface penetration operations only after the customer's validation and completion of the "GE surface penetration permit"

VIBRATION SPECIFICATIONS

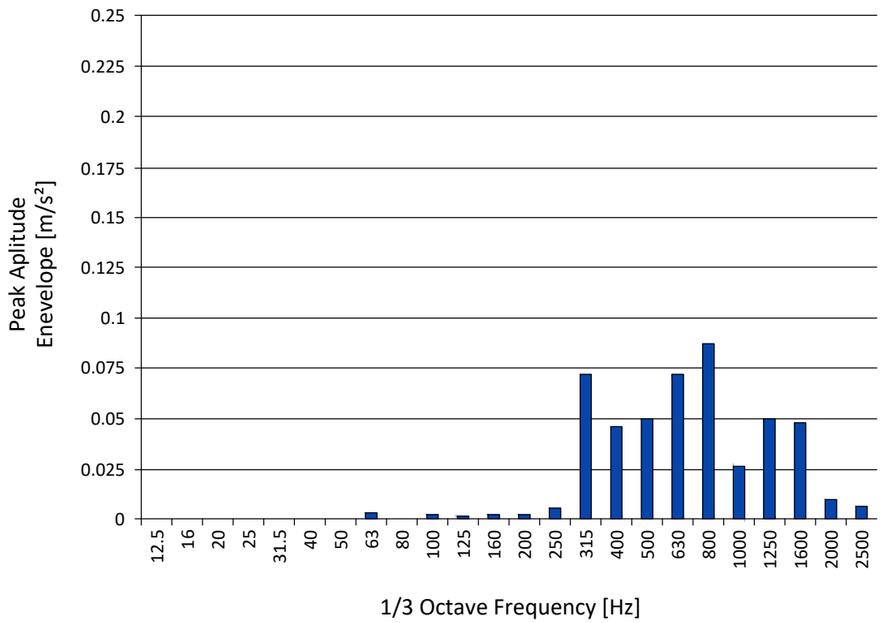
Excessive vibration can affect MR image quality. Vibration testing must be performed early in the site planning process to ensure vibration is minimized. Both steady state vibration (exhaust fans, air conditioners, pumps, etc.) and transient vibrations (traffic, pedestrians, door slamming, etc.) must be assessed. The magnet cannot be directly isolated from vibration. Any vibration issue must be resolved at the source.

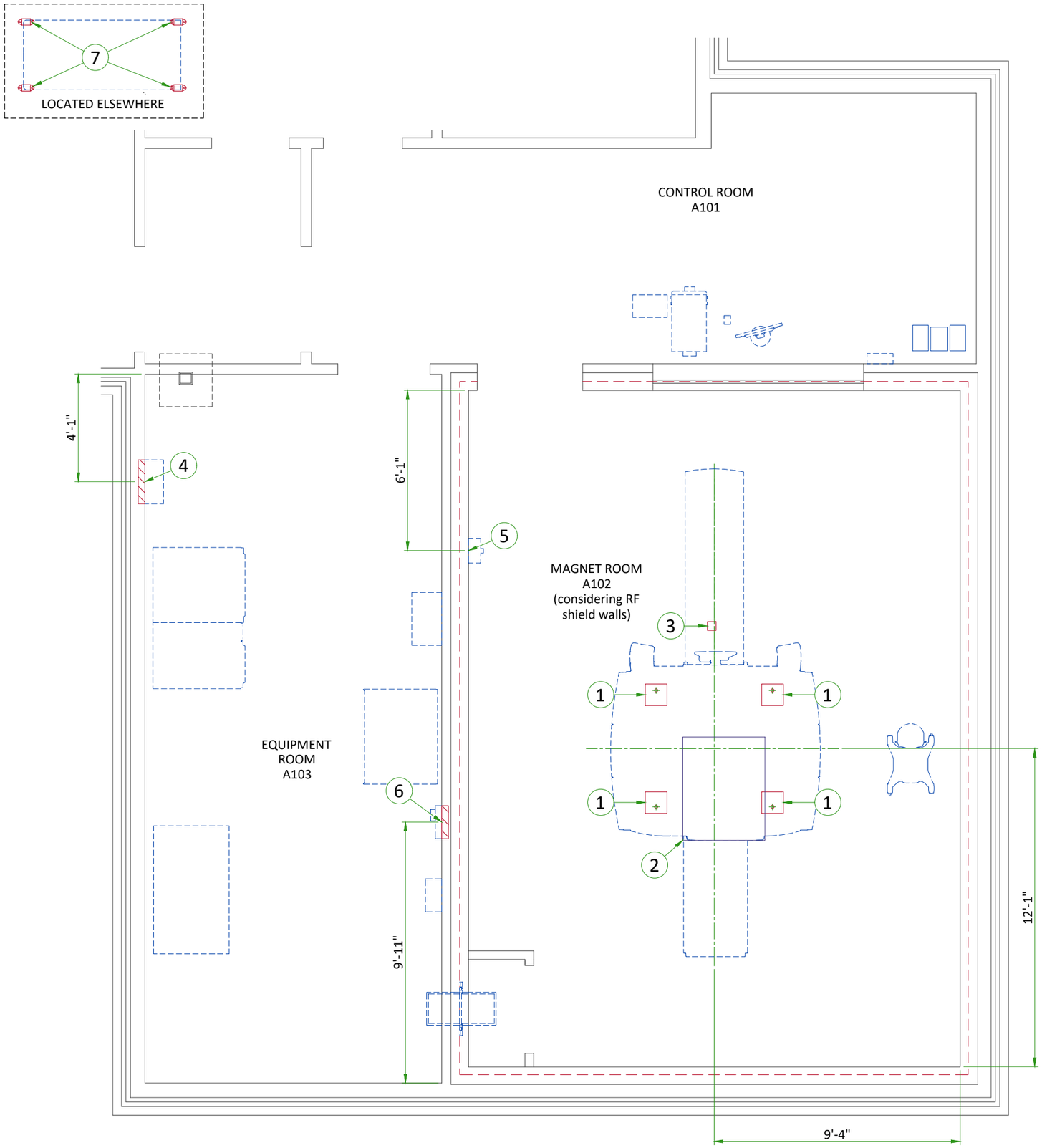
Transient vibration levels above the specified limits in the MR Site Vibration Test Guidelines must be analyzed. Any transient vibration that causes vibration to exceed the steady-state level must be mitigated.

MAGNET STEADY-STATE VIBRATION SPECIFICATIONS



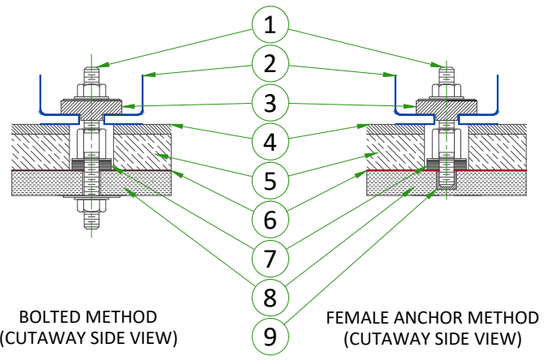
VIBRATION TRANSMITTED THROUGH VIBROACOUSTIC MAT





ITEM	DESCRIPTION
	(GE SUPPLIED / CONTRACTOR INSTALLED)
1	Vibroacoustic dampening kit (see floor structural detail)
2	Magnet cable concealment kit
	(CONTRACTOR SUPPLIED & INSTALLED)
3	Patient table dock rebar free area
4	Structural wall backing for Main Disconnect Panel
5	Structural wall backing for Magnet Rundown Unit
6	Structural wall backing for Magnet Monitor
7	Structural floor support for chiller. Refer to KKT manual.

DOCK/TABLE FRAME ANCHOR MOUNTING REQUIREMENTS



BOLTED METHOD
(CUTAWAY SIDE VIEW)

FEMALE ANCHOR METHOD
(CUTAWAY SIDE VIEW)

1	Removable Anchor Rod (Male insert)
2	Dock
3	Clamp bracket
4	Finished floor
5	Filler Board or Grout
6	RF Shield
7	Conductive Fibrous Washer (RF seal)
8	Concrete
9	Female Anchor Insert

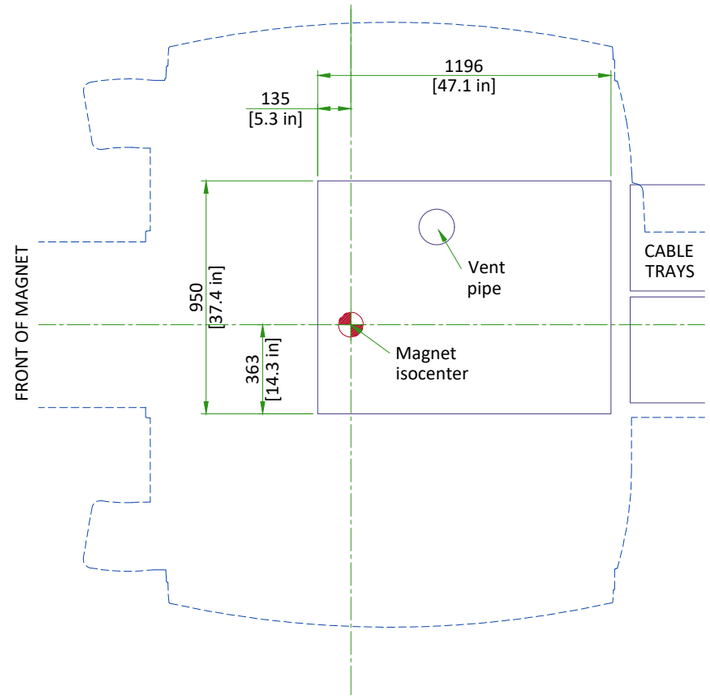
NOT TO SCALE

- The RF Shield vendor must design and install the dock/table frame anchor bolt
- The anchor bolt must be installed **after** the Magnet is installed
- The dock/table frame anchor must not contact floor rebar or other structural steel
- The dock/table frame anchor must electrically contact the RF shield at point of entry
- The RF shield vendor must perform a pull test on the anchor (equal to the clamping force). Results must be provided to the GE HealthCare Project Manager of Installation (PMI).

THE DOCK ANCHOR PROPERTIES MUST COMPLY WITH THE FOLLOWING REQUIREMENTS:

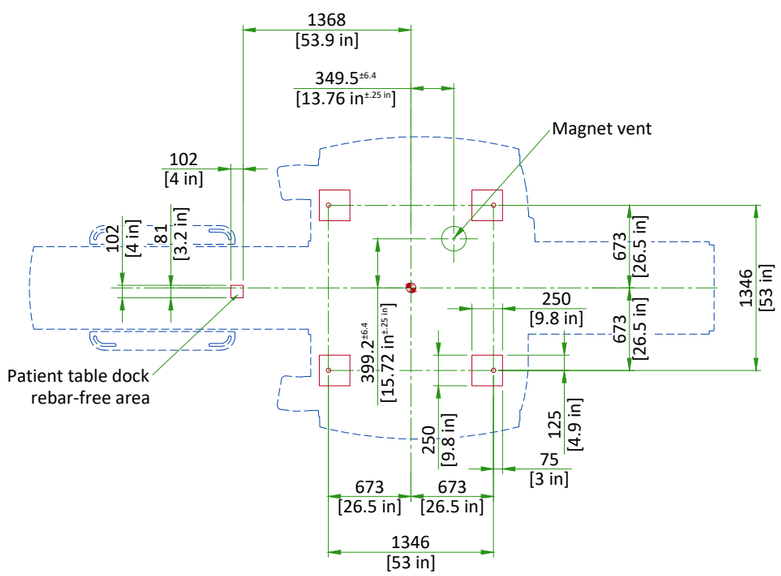
a. Anchors must be two-part assembly (male/female)
b. Female side must be expansion- or epoxy-type
c. Male side must be a bolt or threaded rod with appropriate-sized nut (bolt or rod must be removable - not epoxied or cemented in place)
d. Anchors must be electrically conductive
e. Anchors must be non-ferrous
f. Anchors must not induce galvanic corrosion with the RF shield
g. Anchors must be commercially procured
h. If anchoring a table, the anchor rod hole clearance in the table frame anchor base is 11 mm [0.43 in]. The anchor rod diameter must be sized appropriately.
i. Anchors must meet the following clamping force: 2,669 N [600 lb]
j. The anchor rod must extend at least 35 mm [1.38 in] but not more than 60 mm [2.36 in] above the finished floor.
k. The anchor rod must be less tha 152 mm [6 in] in total length (length above the floor plus embedded length)
l. If underside of deck is metallic, then insulating bushing must be added to through bolt hardware to prevent grounding of shield at this point.

CABLE CONCEALMENT

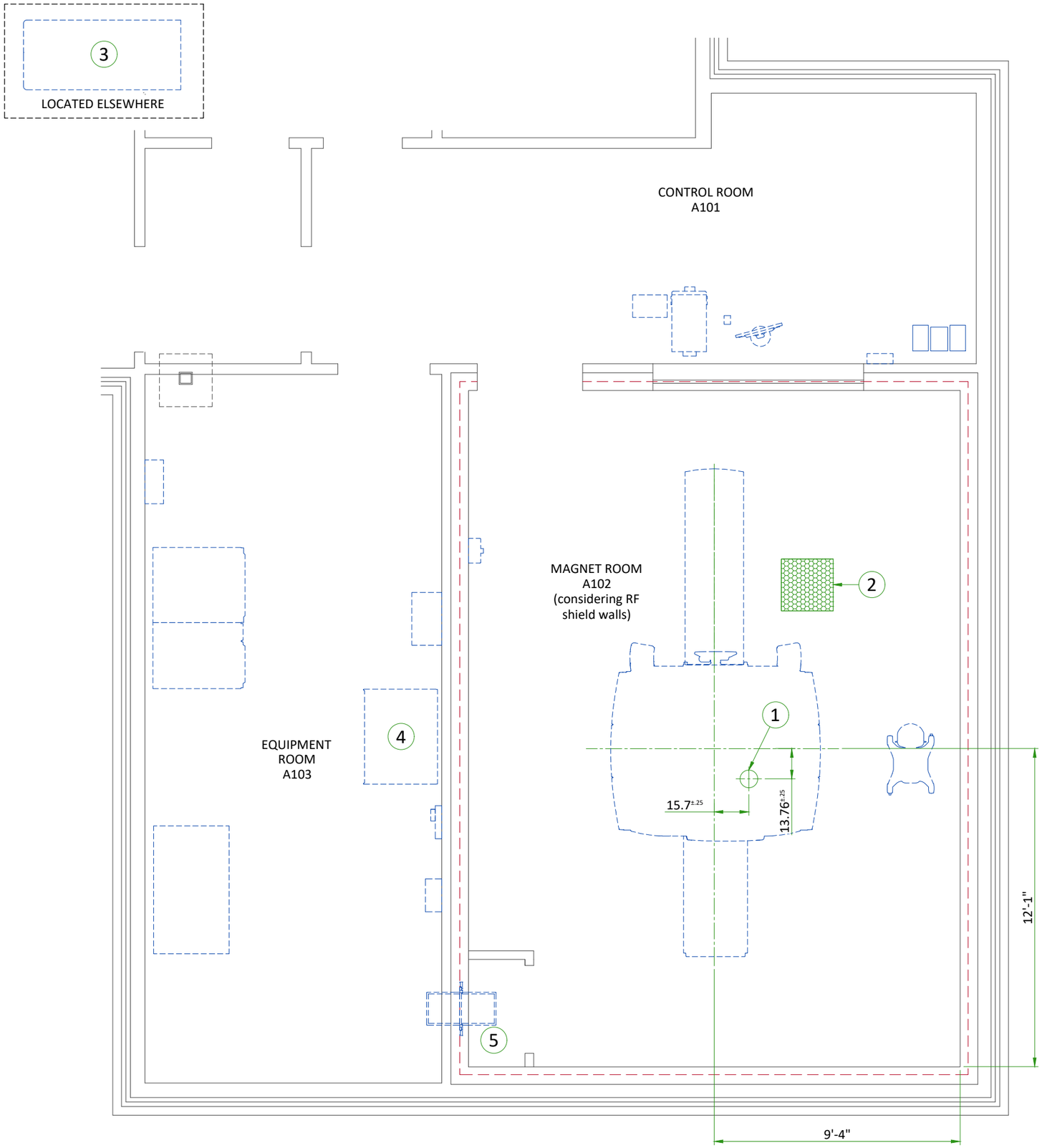


SCALE 1:25

MAGNET MOUNTING



NOT TO SCALE



ITEM	DESCRIPTION
1	Cryogen vent (200mm [8"] O.D.)
2	Emergency exhaust vent - refer to magnet room vent requirements (position to be defined)
3	(2) 50mm [2"] I.D. High pressure hoses and (2) 50mm [2"] to 38mm [1.5"] Reducers
4	38mm [1.5"] NPT Male connectors, (2) 38mm [1.5"] copper lines (insulated) and (2) shut off valves. Refer to chilled water block diagram.
5	Closet must allow free air exchange of 400 CFM between magnet room and closet

MECHANICAL/PLUMBING NOTES

- All piping, fittings, supports, hoses, clamps, ventlation systems, etc. are to be supplied and installed by the customer or his contractors.
- For complete design and requirements, specifications and guidelines refer to the pre-installation manual: system cooling, cryogen venting, waveguides and exhaust venting.
- An emergency water cooling back-up supply is recommended for continuous cryogen compressor operation. if using an open loop back-up design, ensure a drain is provided. please refer to the pre-install manual for optional back-up coolant supply requirements

TEMPERATURE AND HUMIDITY SPECIFICATIONS

IN-USE CONDITIONS

	MAGNET ROOM	CONTROL ROOM	EQUIPMENT ROOM
Temperature	15-21°C	15-32°C	15-32°C [3]
	59-69.8°F	59-89.6°F	59-89.6°F [3]
Temperature gradient [1]	**≤ 3°C/h**	**≤ 3°C/h**	**≤ 3°C/h**
	≤ 5°F/h	**≤ 5°F/h**	**≤ 5°F/h**
Relative humidity	30% to 60%	30% to 70%	30% to 70%
Humidity gradient [2]	**≤ 5%/h**	**≤ 5%/h**	**≤ 5%/h**

NOTE
1) Operating temperature gradient limits shall be between -3°C/hr (-5°F/hr) and 3°C/hr (5°F/hr), when averaged over 1 hour
2) Operating humidity gradient limits shall be between -5% RH/hr and 5% RH/hr (5°F/hr), when averaged over 1 hour
3) Maximum ambient temperature is derated by 1°C per 300 m above 2000 m (not to exceed 2600 m).

AIR RENEWAL

According to local standards.

NOTE
In case of using air conditioning systems that have a risk of water leakage it is recommended not to install it above electric equipment or to take measures to protect the equipment from dropping water.

MAGNET ROOM VENTING REQUIREMENTS

HVAC VENT REQUIREMENTS

- HVAC vendor must comply with Magnet room temperature and humidity specifications and RF shielding specifications.
- RF Shield vendor must install open pipe or honeycomb HVAC waveguides.
- All serviceable parts in the Magnet room (e.g.: diffusers) must be non-magnetic.
- Waveguides must be nonmagnetic and electrically isolated.
- Incoming air must contain at least **5% air** from outside the Magnet room (inside or outside the facility) to displace residual helium.

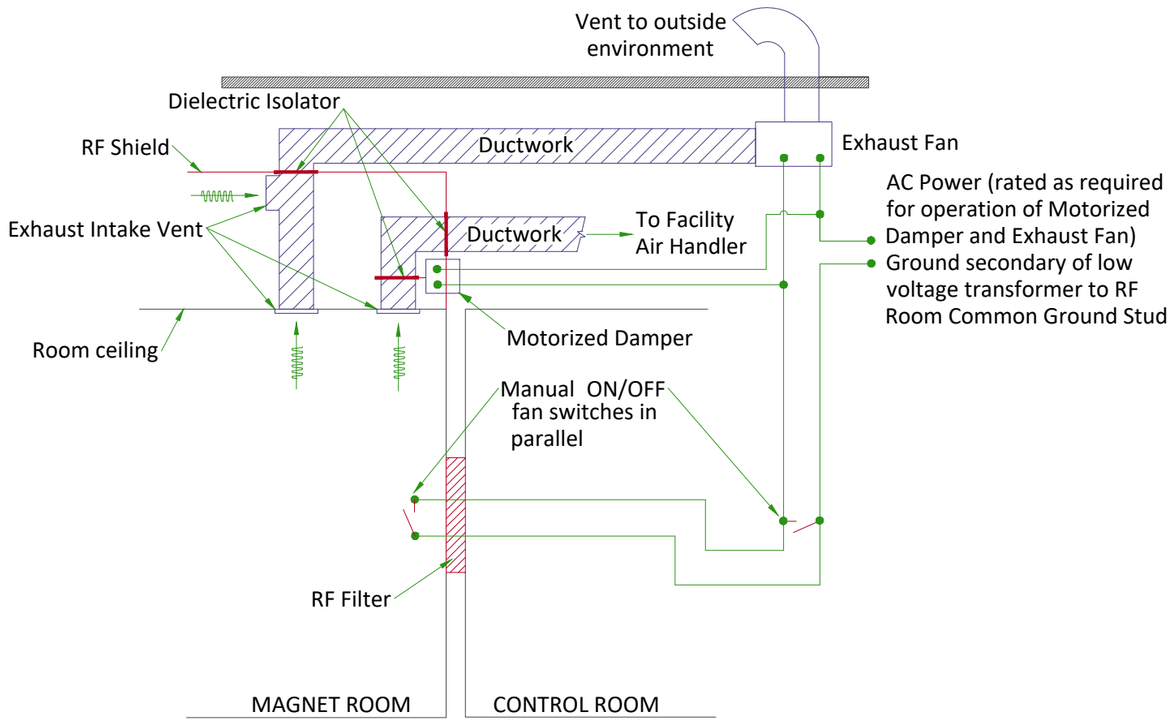
EMERGENCY VENT REQUIREMENT

- Exhaust vent system is supplied by the customer.
- All items within the RF enclosure must be non-magnetic.
- The exhaust vent system must be tested and operational before the magnet is installed.
- The exhaust intake vent must be located near the magnet cryogenic vent at the highest point on the finished or drop ceiling.
- The Magnet room exhaust fan and exhaust intake vent must have a capacity of at least **1200 CFM (34 m^3/min)** with a minimum of **12 room air exchanges per hour.**
- The exhaust fan must be placed above RF shielding located outside 10 gauss (1mT) and with appropriate waveguide.
- The system must have a manual exhaust fan switch near the Operator Workspace and in the Magnet room near the door (the switches must be connected in parallel).
- All system components must be accessible for customer inspection, cleaning and maintenance

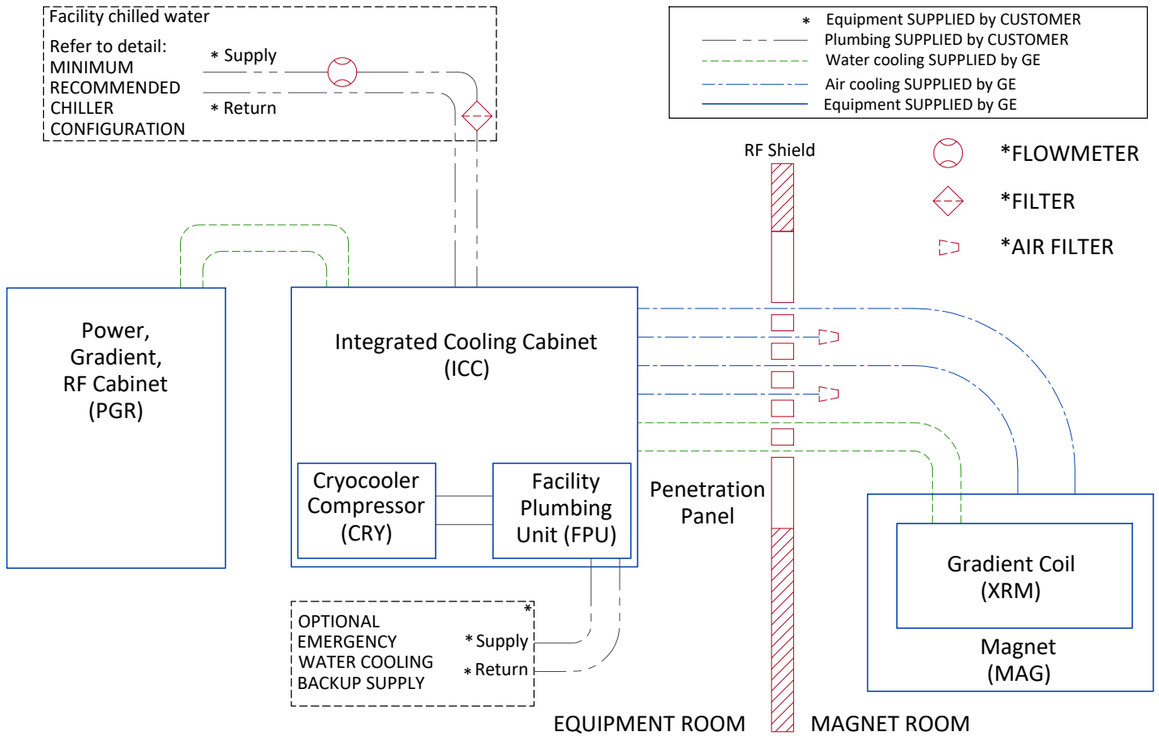
HEAT DISSIPATION DETAILS

DESCRIPTION	ROOM	IDLE W		AVERAGE		MAX	
		W	btu	W	btu	W	btu
Magnet (MAG) and Patient Table (PT)	Magnet	561	1915	1200	4095	2400	8189
Main Disconnect Panel (MDP)	Equipment	132	450	132	450	264	901
Power, Gradient, RF Cabinet (PGR)	Equipment	4298	14665	4866	16603	9502	32421
Integrated Cooling Cabinet (ICC)	Equipment	250	853	600	2046	1000	3410
Cryocooler Compressor (CRY) (Inside ICC)	Equipment	500	1706	500	1706	500	1706
Magnet Monitor (MON)	Equipment	240	819	240	819	240	819
Operator Workspace equipment (OW)	Control	1450	4947	1450	4947	1450	4947
Penetration Panel (PP)	Equipmet	0	0	0	0	0	0

MAGNET ROOM EXHAUST FAN SCHEMATIC



CHILLED WATER BLOCK DIAGRAM

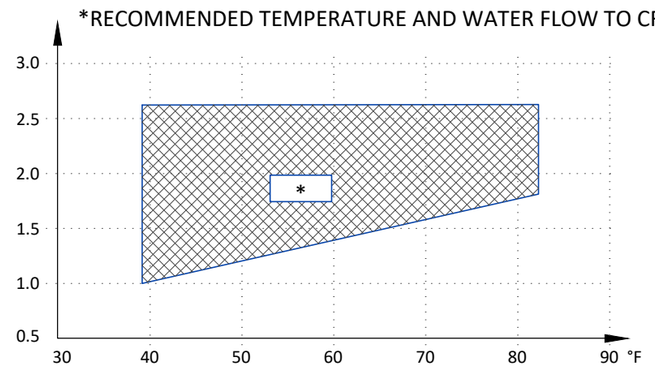


LIQUID COOLANT SPECIFICATIONS

PARAMETER	REQUIREMENTS
Availability	Continuous
Antifreeze	No more than 50% propylene glycol water or ethylene glycol water
Minimum Flow	114 L/min [30 gpm]
Maximum Flow	132 L/min [35 gpm]
Maximum Pressure Drop in ICC at Minimum Flow	2.2 bar (32.0 psi) with 50% propylene glycol-water; 1060 kg/m³ density 1.4 bar (20.3 psi) with pure water; 994 kg/m³ density
Maximum Pressure Drop in ICC at Maximum Flow	2.9 bar (42 psi) with 50% propylene glycol-water; 1060 kg/m³ density 1.9 bar (27.6 psi) with pure water; 994 kg/m³ density
Temperature rise at Minimum Flow	7.3°C (13°F) with 50% propylene glycol-water; 3346 J/(kg K) specific heat; 1060 kg/m³ density; 49 kW heat
Temperature rise at Maximum Flow	6.3°C (11.3°F) with 50% propylene glycol-water; 3346 J/(kg K) specific heat; 1060 kg/m³ density; 49 kW heat
Maximum inlet pressure to ICC	6 bar [87 psi]
Chiller size	Minimum 49 kW
Condensation protection	Facility plumbing to the ICC must be properly routed and insulated to prevent equipment damage or safety hazards
Minimum continuous heat load	7.5 kW
Inlet temperature to ICC	5 to 15°C [41 to 59° F]
Customer supplied feeder hose (from main water supply to ICC)	38.1 mm [1.5 in] minimum hose inside diameter
Water quality	Refer to pre-installation manual for detailed specifications

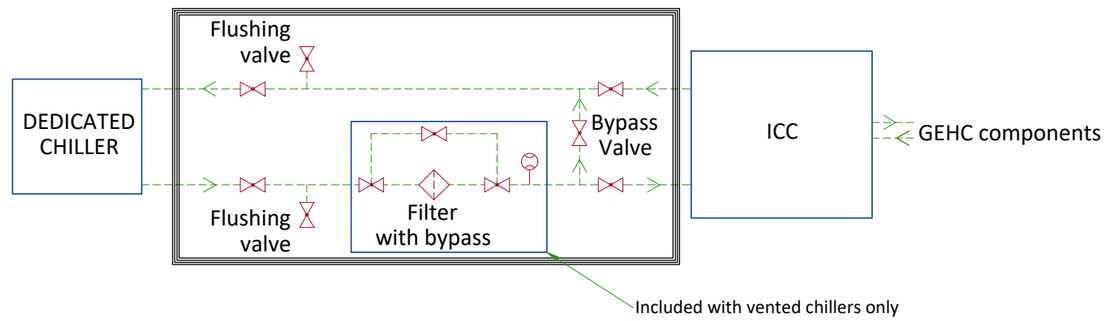
CITY WATER BACKUP SPECIFICATIONS FOR COMPRESSOR

INLET WATER FLOW/TEMPERATURE FOR CRYOCOOLER COMPRESSOR



	MIN	MAX
INLET TEMP	39.2°F (4°C)	82.4°F (28°C)
INLET FLOW	1.0 gpm (4 l/min)	2.6 gpm (10 l/min)
TEMP RISE	89.6°F at 1.0 gpm (32°C at 4 l/min flow)	53.6°F at 2.6 gpm (12°C at 10 l/min flow)
HEAT DISSIPATION (kW)	7.2 kW	
PRESSURE DROP	8.7 psi at 2.1 gpm flow (60 kPa at 8 l/min flow)	

MINIMUM RECOMMENDED CHILLER CONFIGURATION



FLOW METER (Included with Chiller Interface Panel option)

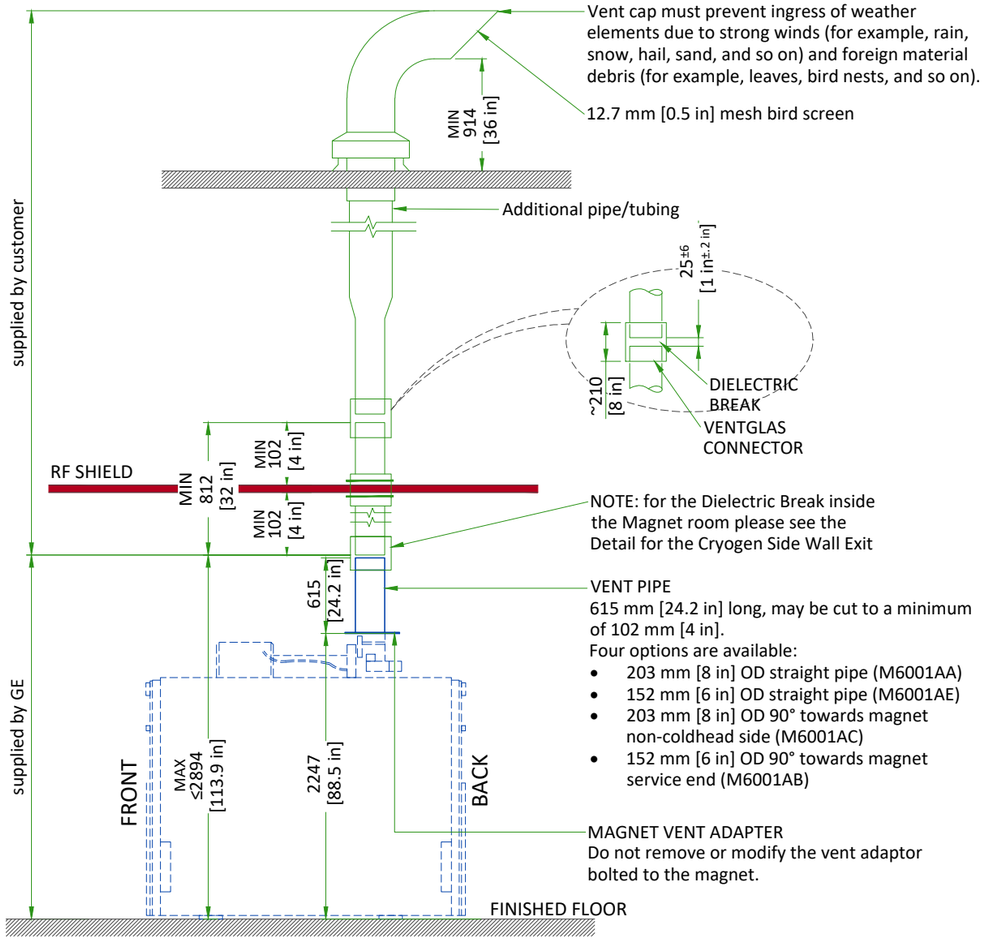
VALVE

FILTER

Equipment supplied by GEHC

Customer/contractor supplied and installed

TYPICAL CRYOGENIC VENT PIPE DETAIL



Waveguide is contractor supplied. Minimum 812 mm [32 in]. Must extend at least 102 mm [4 in] on magnet room side of the wall/ceiling and 25±6 mm [1±0.25 in] from the GEHC supplied pipe below isolation joint.

1. The 203 mm [8 in] or 152 mm [6 in] OD vent material must be one of the following materials with the wall thickness indicated:
   a. SS 304: Minimum 0.89 mm [0.035 in]; Maximum 3.18 mm [0.125 in]
   b. AL 6061-T6: Minimum 2.11 mm [0.083 in]; Maximum 3.18 mm [0.125 in]
   c. CU DWV, M or L: Minimum 2.11 mm [0.083 in]; Maximum 3.56 mm [0.140 in]
2. Either tubes or pipes may be used and must be seamless or have welded seams

NOTE

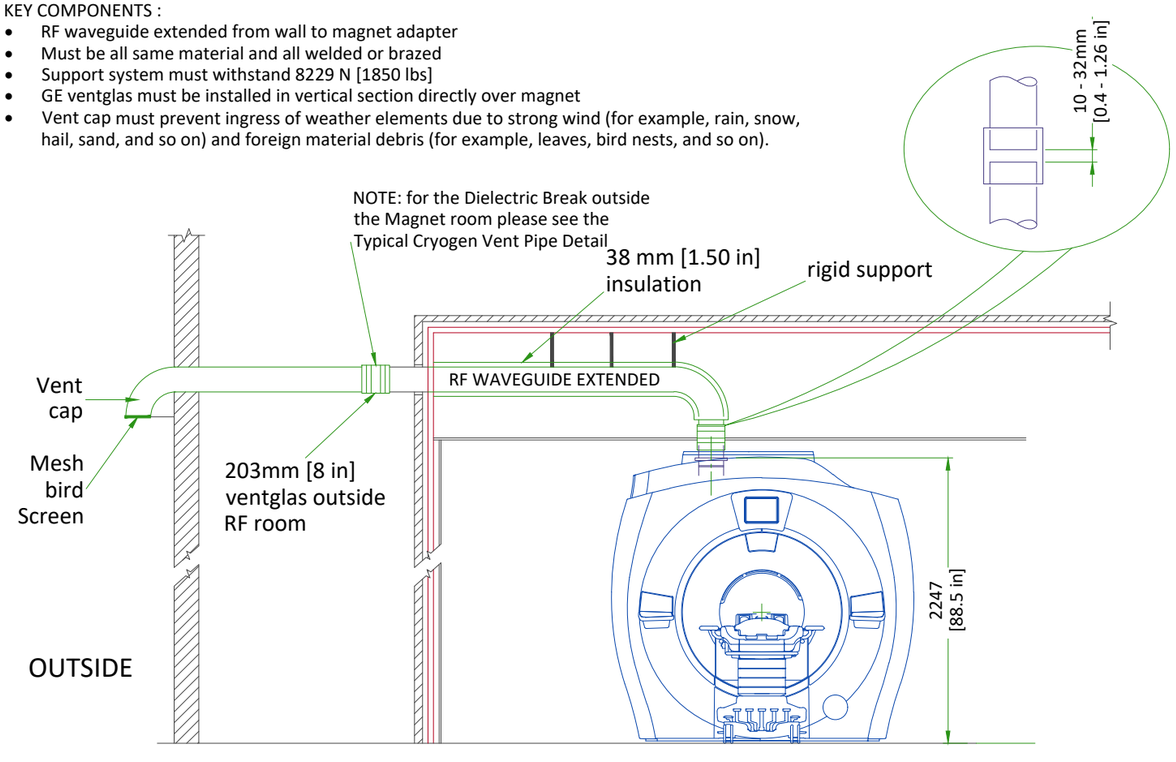
All welds on the pipe must be ground down to a smooth 203 mm [8 in] or 152 mm [6 in] diameter so that it can be clamped to the Ventglas with enough force.

3. Corrugated pipe or spiral duct must not be used
4. If required, bellows pipe less than 300 mm [12 in] in length may be used as a thermal expansion joint
5. The vent pipe must withstand the maximum pressure listed in the Pre-Installation Manual
6. Waveguide vent material must match the outside diameter of the magnet flanged vent adapter

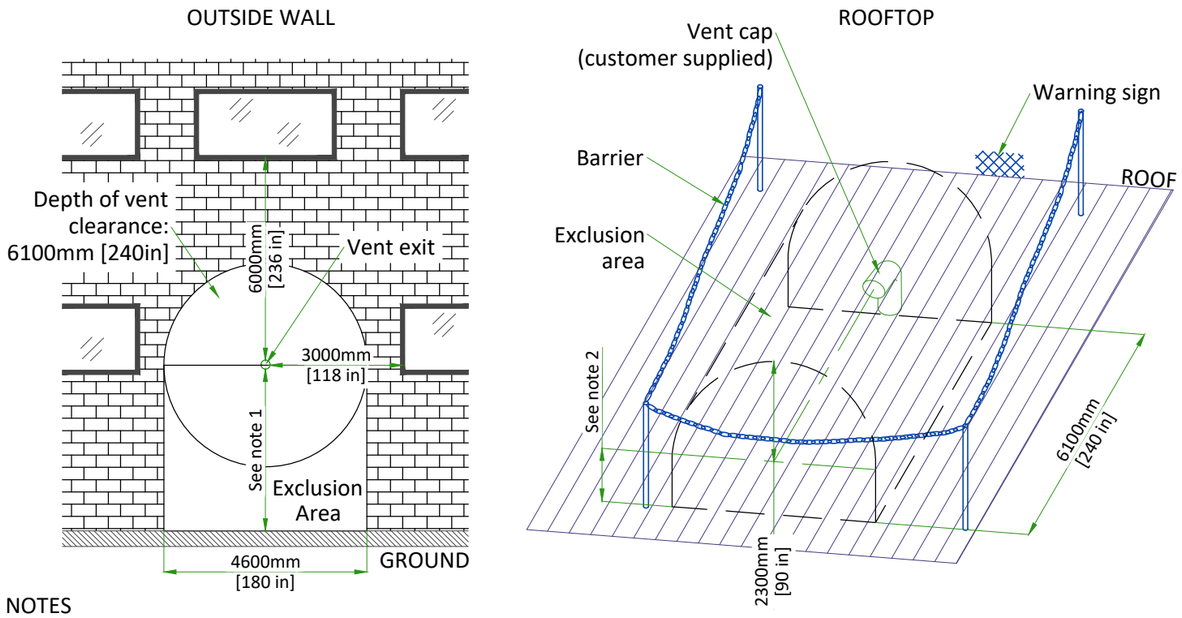
TYPICAL CRYOGEN SIDE WALL EXIT WITH LONG SWEEP ELBOW

KEY COMPONENTS :

- RF waveguide extended from wall to magnet adapter
- Must be all same material and all welded or brazed
- Support system must withstand 8229 N [1850 lbs]
- GE ventglas must be installed in vertical section directly over magnet
- Vent cap must prevent ingress of weather elements due to strong wind (for example, rain, snow, hail, sand, and so on) and foreign material debris (for example, leaves, bird nests, and so on).



CRYOGENIC VENTING (EXTERIOR)



NOTES

(1) Restricted area: minimum distance between vent pipe and ground is 3660mm [144 in]. Barriers are required. Public area: barriers are not required if height is > 5000mm [197 in].

(2) The bottom of the 90° elbow must be at least 914mm [36 in] above the roof deck (or higher if at risk of being blocked by drifting snow, sand, or other potential obstructions.)

NOT TO SCALE

MAGNET CRYOGENIC VENT SYSTEM PRESSURE DROP MATRIX

Outer dia. of pipe (D)	Distance of vent system component from magnet		Pressure drop for straight pipe		Std sweep 45° elbow		Long sweep 45° elbow		Std sweep 90° elbow		Long sweep 90° elbow		90° miter	
	ft	m	psi/ft	kPa/m	psi	kPa	psi	kPa	psi	kPa	psi	kPa	psi	kPa
144 mm (6 in.)	0-10	0.00-3.05	0.146	3.311	0.804	5.544	0.536	3.696	1.507	10.394	1.005	6.93	3.014	20.789
	10-20	3.05-6.10	0.253	5.715	1.356	9.355	0.904	6.237	2.543	17.54	1.696	11.694	5.087	35.081
	20-30	6.10-9.15	0.374	8.451	1.845	12.727	1.23	8.485	3.46	23.864	2.307	15.909	6.92	47.727
	30-40	9.15-12.19	0.473	10.699	2.278	15.708	1.518	10.472	4.271	29.453	2.847	19.635	8.541	58.906
	40-50	12.19-15.25	0.554	12.534	2.66	18.342	1.773	12.228	4.987	34.392	3.325	22.928	9.974	68.783
	50-60	15.25-18.29	0.62	14.019	2.997	20.668	1.998	13.779	5.619	38.753	3.746	25.835	11.238	77.506
200 mm (8 in.)	0-10	0.00-3.05	0.025	0.564	0.188	1.294	0.125	0.862	0.352	2.426	0.234	1.617	0.703	4.851
	10-20	3.05-6.10	0.043	0.97	0.313	2.158	0.209	1.439	0.587	4.046	0.391	2.697	1.173	8.092
	20-30	6.10-9.15	0.064	1.45	0.427	2.944	0.285	1.963	0.8	5.52	0.534	3.68	1.601	11.04
	30-40	9.15-12.19	0.082	1.862	0.53	3.658	0.354	2.439	0.995	6.859	0.663	4.573	1.989	13.718
	40-50	12.19-15.25	0.098	2.215	0.624	4.307	0.416	2.871	1.171	8.075	0.781	5.383	2.342	16.15
	50-60	15.25-18.29	0.111	2.516	0.71	4.895	0.473	3.263	1.331	9.179	0.887	6.119	2.662	18.357
	60-80	18.29-24.39	0.132	2.987	0.857	5.914	0.572	3.942	1.608	11.088	1.072	7.392	3.216	22.176
	80-100	24.39-30.49	0.147	3.318	0.979	6.752	0.653	4.501	1.836	12.659	1.224	8.439	3.671	25.318
250 mm (10 in.)	0-20	0.00 - 6.10	0.011	0.241	0.099	0.683	0.066	0.455	0.186	1.28	0.124	0.854	0.371	2.561
	20-40	6.10-12.19	0.021	0.468	0.168	1.16	0.112	0.773	0.315	2.175	0.21	1.45	0.631	4.351
	40-60	12.19-18.29	0.029	0.645	0.227	1.568	0.152	1.045	0.426	2.94	0.284	1.96	0.853	5.88
	60-80	18.29-24.39	0.035	0.781	0.278	1.916	0.185	1.277	0.521	3.592	0.347	2.395	1.042	7.184
	80-100	24.39-30.49	0.039	0.884	0.321	2.212	0.214	1.474	0.601	4.147	0.401	2.765	1.203	8.294
300 mm (12 in.)	0-20	0.00 - 6.10	0.004	0.08	0.04	0.277	0.027	0.184	0.075	0.519	0.05	0.346	0.15	1.037
	20-40	6.10-12.19	0.007	0.157	0.068	0.47	0.045	0.313	0.128	0.88	0.085	0.587	0.255	1.761
	40-60	12.19-18.29	0.01	0.22	0.093	0.638	0.062	0.425	0.174	1.197	0.116	0.798	0.347	2.393
	60-80	18.29-24.39	0.012	0.269	0.114	0.786	0.076	0.524	0.214	1.473	0.142	0.982	0.427	2.946
	80-100	24.39-30.49	0.014	0.309	0.133	0.914	0.088	0.609	0.248	1.714	0.166	1.142	0.497	3.427
350 mm (14 in.)	0-20	0.00 - 6.10	0.001	0.032	0.019	0.13	0.013	0.086	0.035	0.243	0.024	0.162	0.071	0.486
	20-40	6.10-12.19	0.003	0.063	0.032	0.219	0.021	0.146	0.06	0.411	0.04	0.274	0.119	0.823
	40-60	12.19-18.29	0.004	0.088	0.043	0.299	0.029	0.2	0.081	0.561	0.054	0.374	0.163	1.122
	60-80	18.29-24.39	0.005	0.11	0.054	0.37	0.036	0.247	0.101	0.694	0.067	0.463	0.201	1.389
	80-100	24.39-30.49	0.006	0.127	0.063	0.433	0.042	0.289	0.118	0.812	0.079	0.542	0.236	1.625
400 mm (16 in.)	0-20	0.00 - 6.10	0.001	0.014	0.01	0.068	0.007	0.045	0.018	0.127	0.012	0.084	0.037	0.253
	20-40	6.10-12.19	0.001	0.028	0.017	0.114	0.011	0.076	0.0310	0.2130	0.021	0.142	0.062	0.427
	40-60	12.19-18.29	0.002	0.04	0.023	0.156	0.015	0.104	0.042	0.292	0.028	0.195	0.085	0.584
	60-80	18.29-24.39	0.002	0.05	0.028	0.193	0.019	0.129	0.053	0.362	0.035	0.242	0.105	0.725
	80-100	24.39-30.49	0.003	0.059	0.033	0.227	0.022	0.151	0.062	0.426	0.041	0.284	0.124	0.852

Notes

1. Refer to Magnet Room Venting manual 5850263-1EN for specifications of distances >100 ft (30.49 m).
2. Elbows with angles greater than 90° must not be used
3. Data in Table is based on the following facts and assumptions:
   a. Initial flow conditions at magnet interface
   b. EM energy (13MJ) is dumped to He during quench and rises He temperature to 10 Kelvin
   c. Gas temperature starting at 10 Kelvin and increase with length determined by thermal energy balance
   d. 90% He is assumed to be evacuated within 30 sec. None left after quench.
   e. Absolute roughness is assumed to be 0.25 mm.
   f. R/D = 1.0 for standard sweep elbows, R/D = 1.5 for long sweep elbows where D = outer diameter of pipe; R = radius of bend
4. The total pressure drop of the entire cryogenic vent system varies with the type of adapter selected, refer to Magnet Room Venting manual. The calculation starts at the magnet vent interface and ends at the termination point outside the building.

LIGHTING REQUIREMENTS

- All lighting fixtures and associated components must meet all RF shielded room and RF grounding requirements (e.g., track lighting is not recommended due to possible RF noise).
- All removable lighting fixtures and associated components must be non-magnetic.
- All lighting must use direct current (the DC must have less than 5% ripple).
- 300 lux must be provided at the front of the magnet for patient access and above the magnet for servicing.
- Fluorescent lighting must not be used in the magnet room.
- Lighting must be adjusted using a discrete switch or a variable DC lighting controller.
- SCR dimmers or rheostats must not be used.
- DC LED lighting may be used if the DC power converter and RF sources are all located outside the magnet room RF shield.

  NOTE: LED lighting could cause image quality issues due to RF interference. Make sure a MR-compatible LED lighting solution is chosen.
- Battery chargers (e.g., used for emergency lighting) must be located outside the magnet room.
- LED Lighting or short filament length incandescent bulbs are recommended.
- Linear lamps are not recommended due to the high burnout rate.

CONNECTIVITY REQUIREMENTS

Your new GE Healthcare imaging modality will require local and remote connectivity to enable our full range of digital support:

- Local connectivity - This allows your system to connect to local devices such as PACS and modality worklist. We will require network information to configure the system(s), and a live ethernet port(s) prior to the delivery of the system(s).
- Remote connectivity - Your GE Healthcare service warranty includes InSite™ (applicable to InSite capable products), a powerful broadband-based service which enables digital tools that can help guard your hospital against equipment downtime and revenue loss by quickly connecting you to a GE Healthcare expert.

Depending on product family and software version, imaging systems can be connected in one of the following methods:

1. TLS over TCP Port 443 (Preferred method for new products) via:
   a. DNS resolution
   b. Customer-provided Proxy or
   c. GE Proxy (Available in some regions)
2. Site-to-Site IPsec VPN tunnel

Please provide the GE project manager with the contact information for the resource that can provide information required to set up these connections. GEHC will send out communication to these contacts, which will include the project's Connectivity requirements, and a Connectivity form. This form will need to be completed and returned to GEHC prior to delivery of the system to ensure the system is tested and connectivity is enabled prior to the completion of the installation.

ELECTRICAL NOTES

1. Aluminum or solid wires are not allowed.
2. Wire sizes given are for use of equipment. Larger sizes may be required by local codes.
3. It is recommended that all wires be color coded, as required in accordance with national and local electrical codes.
4. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or national codes.
5. Convenience outlets are not illustrated. Their number and location are to be specified by others. Locate at least one convenience outlet close to the system control, the power distribution unit and one on each wall of the procedure room. Use hospital approved outlet or equivalent.
6. General room illumination is not illustrated. Caution should be taken to avoid excessive heat from overhead spotlights. Damage can occur to ceiling mounting components and wiring if high wattage bulbs are used. Recommend low wattage bulbs no higher than 75 watts and use dimmer controls (except MR). Do not mount lights directly above areas where ceiling mounted accessories will be parked.
7. Routing of cable ductwork, conduits, etc., must run direct as possible otherwise may result in the need for greater than standard cable lengths (refer to the interconnection diagram for maximum usable lengths point to point).
8. Conduit turns to have large, sweeping bends with minimum radius in accordance with national and local electrical codes.
9. In some cases GEHC will specify ground wires to be sized larger than code. In these situations, the GEHC specification must be followed.
10. A special grounding system is required in all procedure rooms by some national and local codes. It is recommended in areas where patients might be examined or treated under present, future, or emergency conditions. Consult the governing electrical code and confer with appropriate customer administrative personnel to determine the areas requiring this type of grounding system.
11. The maximum point to point distances illustrated on this drawing must not be exceeded.
12. Physical connection of primary power to GEHC equipment is to be made by customers electrical contractor with the supervision of a GEHC representative. The GEHC representative would be required to identify the physical connection location, and insure proper handling of GEHC equipment.
13. GEHC conducts power audits to verify quality of power being delivered to the system. The customer's electrical contractor is required to be available to support this activity.
14. Every installation is unique. The electrical contractor will be required to support the installation of the GEHC equipment by providing knockouts, grommeted openings, bushings, etc. as required. All power connections to be performed by the electrician.

- All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be supplied and installed by customers electrical contractor. All junction boxes shall be provided with covers.
- Conduit and duct runs shall have gradual sweep radius bends.
- Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as possible to reduce run length.
- Ceiling mounted junction boxes illustrated on this plan must be installed flush with finished ceiling.
- All ductwork must meet the following requirements:
  1.Ductwork shall be metal with dividers and have removable, accessible covers.
  2. Ductwork shall be certified/rated for electrical power purposes.
  3. Ductwork shall be electrically and mechanically bonded together in an approved manner.
  4. PVC as a substitute must be used in accordance with all local and national codes.
- All openings in raceway and access flooring are to be cut out and finished off with grommet material by the customers contractor.
- Electrical contractor to provide measured pull strings in all conduit and raceway runs.
- Provide 10 foot pigtails at all junction points.
- Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications shown on this plan.

FLORIDA ELECTRICAL NOTES

GROUNDING:

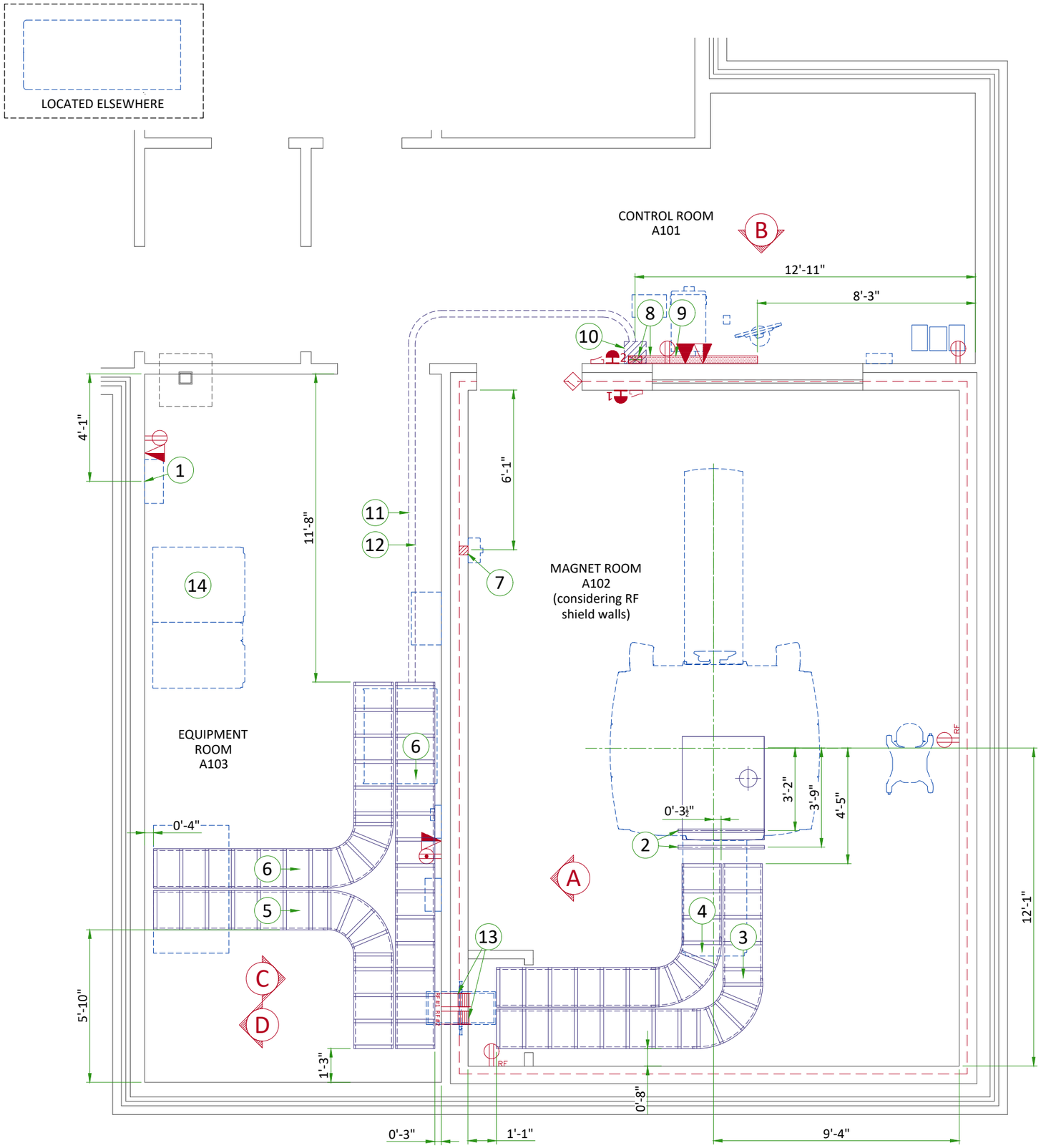
- All equipment must have redundant grounding provided by the electrical contractor.
- All nipples require ground studs.
- All duct work requires ground jumpers at all joints.
- All GEHC Cabinets must be connected to the duct or junction boxes with direct bonding or jumper wires.
- Overhead Tube or TV Monitors must have a ground wire from the duct or junction box to the TV Monitor or X-Ray Tube Unit.
- The electrical contractor must provide the ground conductors.

SEPERATIONS:

- All cables must be separated by voltage marked on cables and by class from other cables.
- Dividers and proper cross over tunnels must be provided and installed by the electrical contractor.
- All digital wiring, power, buss cables and coaxial cables must be kept in separate duct compartments for their entire run.
- The termination points of monitors, VCRs, etc. require separate junction boxes and cover plates for power and video with blank cover plates provided by the electrical contractor. Individual conduit runs are suggested when possible instead of duct runs.
- Please note that it is the responsibility of the electrical contractor to procure and install all zipper tubing where deemed necessary by local code. This includes, but is not limited to cross-overs, junction boxes and sections of raceways where adequate dividers are not in place.

MRI:

- Convenience outlet in Magnet Room must be for service only per AHCA requirements and marked "FOR SERVICE ONLY" or as directed by latest AHCA requirements.

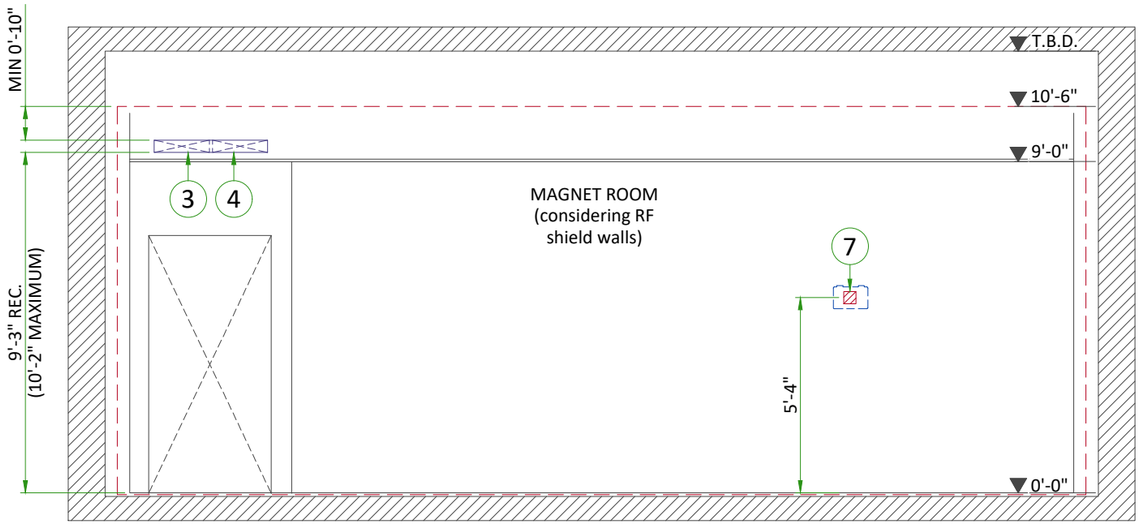


Item	Electrical Layout Item List
1	Main disconnect panel (MDP)
2	Non-ferrous unistrut cable support 36" [915]
3	Non-ferrous cable ladder 18" x 4" [450 x 100]
4	Non-ferrous cable ladder for gradient cables 18" x 4" [450 x 100]
5	Cable tray for gradient cables 18" x 4" [450 x 100]
6	Cable ladder 18" x 4" [450 x 100]
7	Box in wall 4" x 4" x 2" [100 x 100 x 50] (MRU)
8	Surface wall duct with minimum 2 dividers 6" x 3 1/2" [150 x 100]
9	Grommeted opening (Operators console)
10	Box above ceiling size per code
11	Conduit above RF screen 2" [50]
12	Conduit above RF screen 3" [75]
13	RF Filters - grounded to RF shield at Common Ground Stud
14	Eaton 93PM Full UPS

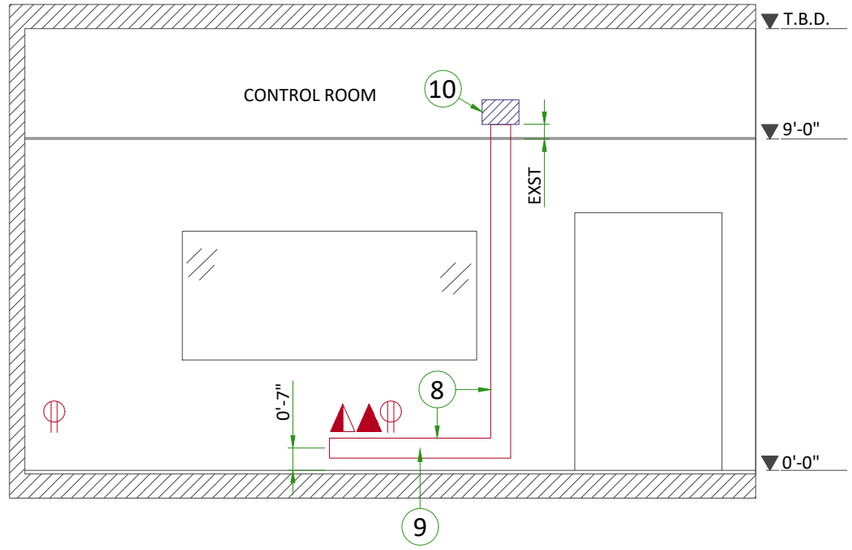
ITEM	QTY	Electrical Outlet Legend Customer/contractor supplied and installed items unless otherwise specified. Height above floor determined by local codes unless otherwise specified.
		System emergency off (EO1, 2), (recommended height 1.2m [48"] above floor)
		Door interlock switch
		Emergency exhaust fan switch 1.2m [48"] height recommended)
		Duplex hospital grade, dedicated wall outlet 120-v, single phase power
		Network outlet
		Dedicated telephone lines/network connection
		Duplex hospital grade, dedicated outlet 120-v emergency, single phase power, 15a
RF		Duplex hospital grade, dedicated outlet 120-v, single phase outlet routed through RF filter

Additional Conduit Runs
(Contractor Supplied and Installed)

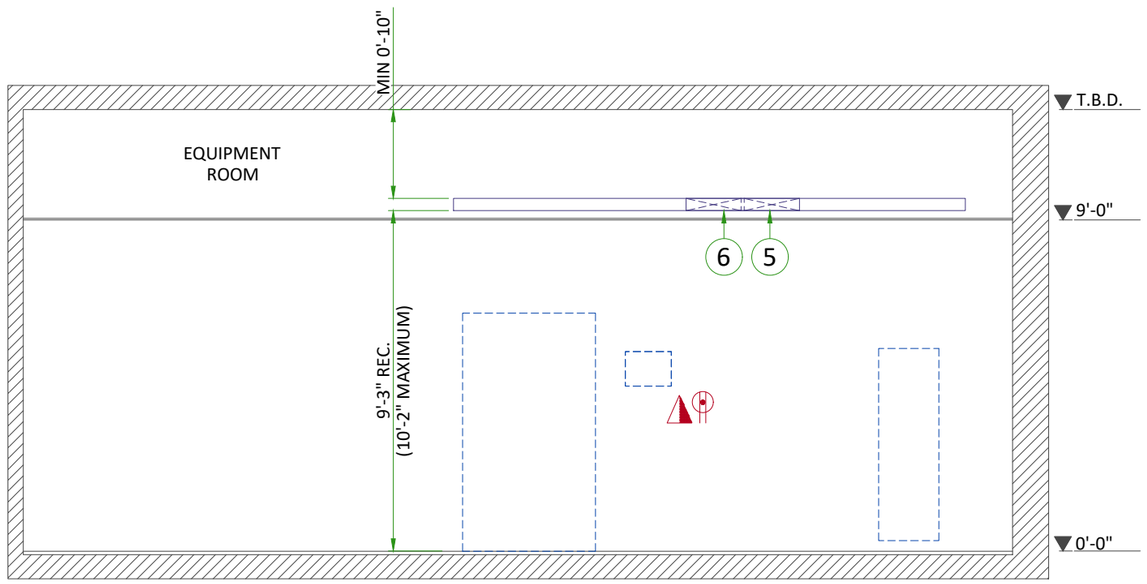
From (Bubble # / Item)		To (Bubble # / Item)		Qty	Size In.	Size mm
1	Main Disconnect Panel		Power, Gradient, RF cabinet	1	As req'd	As req'd
			Integrated Cooling Cabinet	1	As req'd	As req'd
			System emergency off 2	1	1/2	16
	System emergency off 2		Penetration Panel	1	1/2	16
	Door switch		Power, Gradient, RF cabinet	1	3/4	20
	System emergency off 1		Penetration Panel	1	3/4	20
7	Magnet Rundown Unit		Magnet	1	1	25
			RF filter #1	1	As req'd	As req'd
	RF filter #1		120-V 1Ø Power	1	As req'd	As req'd
	Room Light		RF filter #2	1	As req'd	As req'd
	RF filter #2		Facility emergency power	1	As req'd	As req'd
14	Eaton 93PM Full UPS	1	Main Disconnect Panel	1	As req'd	As req'd
			Facility Power		As req'd	As req'd


MIN 0'-10"
9'-3" REC.
(10'-2" MAXIMUM)
T.B.D.
10'-6"
9'-0"
0'-0"
3
4
MAGNET ROOM
(considering RF
shield walls)
7
5'-4"

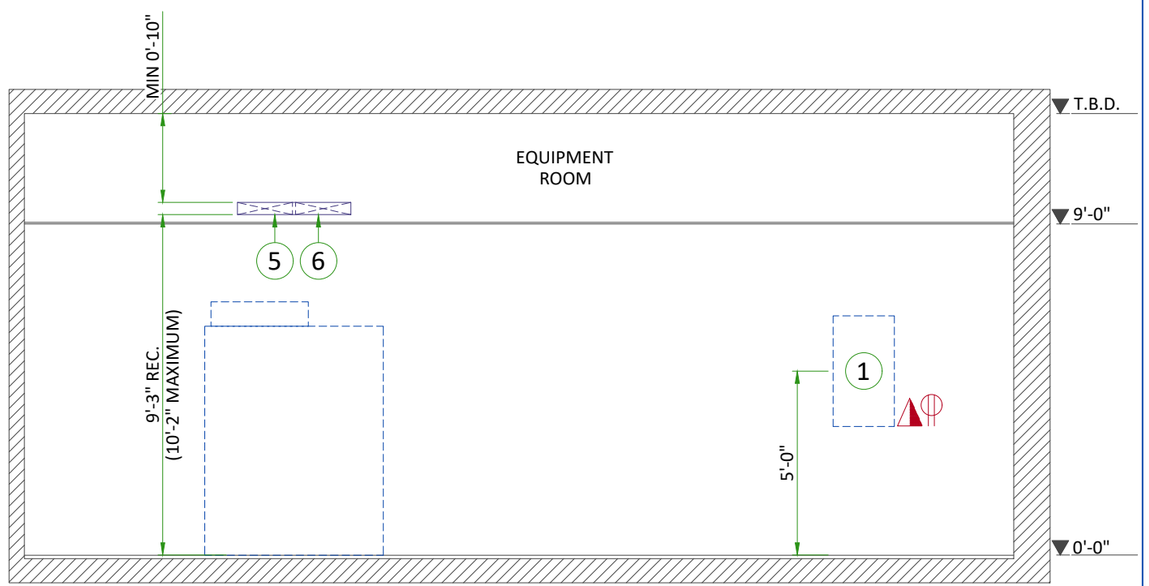
A


T.B.D.
CONTROL ROOM
10
9'-0"
EXST
0'-7"
8
9
0'-0"

B


MIN 0'-10"
T.B.D.
EQUIPMENT
ROOM
9'-0"
6
5
9'-3" REC.
(10'-2" MAXIMUM)
0'-0"

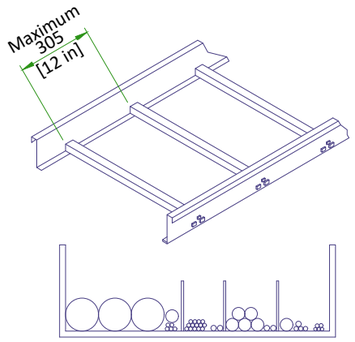
C

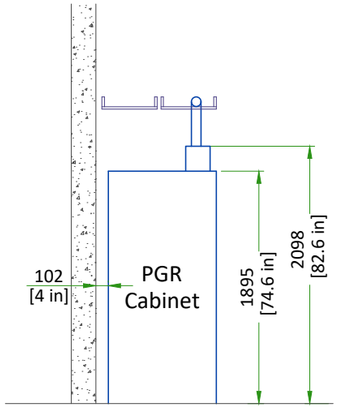

MIN 0'-10"
T.B.D.
EQUIPMENT
ROOM
9'-0"
5
6
9'-3" REC.
(10'-2" MAXIMUM)
1
5'-0"
0'-0"

D

CABLE TRAYS IN EQUIPMENT ROOM

CABLE TRAY DETAIL





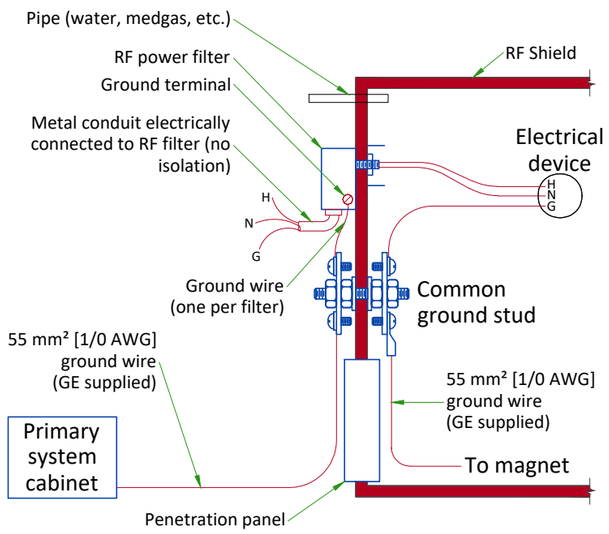
Minimum Cable Tray Width					
	PGR		ICC		OW
	Electrical	Air/Water	Electrical	Air/Water	Electrical
Pen Panel	300 [12 in]	N/A	N/A	450 [18 in]	76 [3 in]
PGR	N/A	N/A	76 [3 in]	150 [6 in]	76 [3 in]
ICC	76 [3 in]	150 [6 in]	N/A	N/A	N/A
OW	76 [3 in]	N/A	N/A	N/A	N/A

NOT TO SCALE

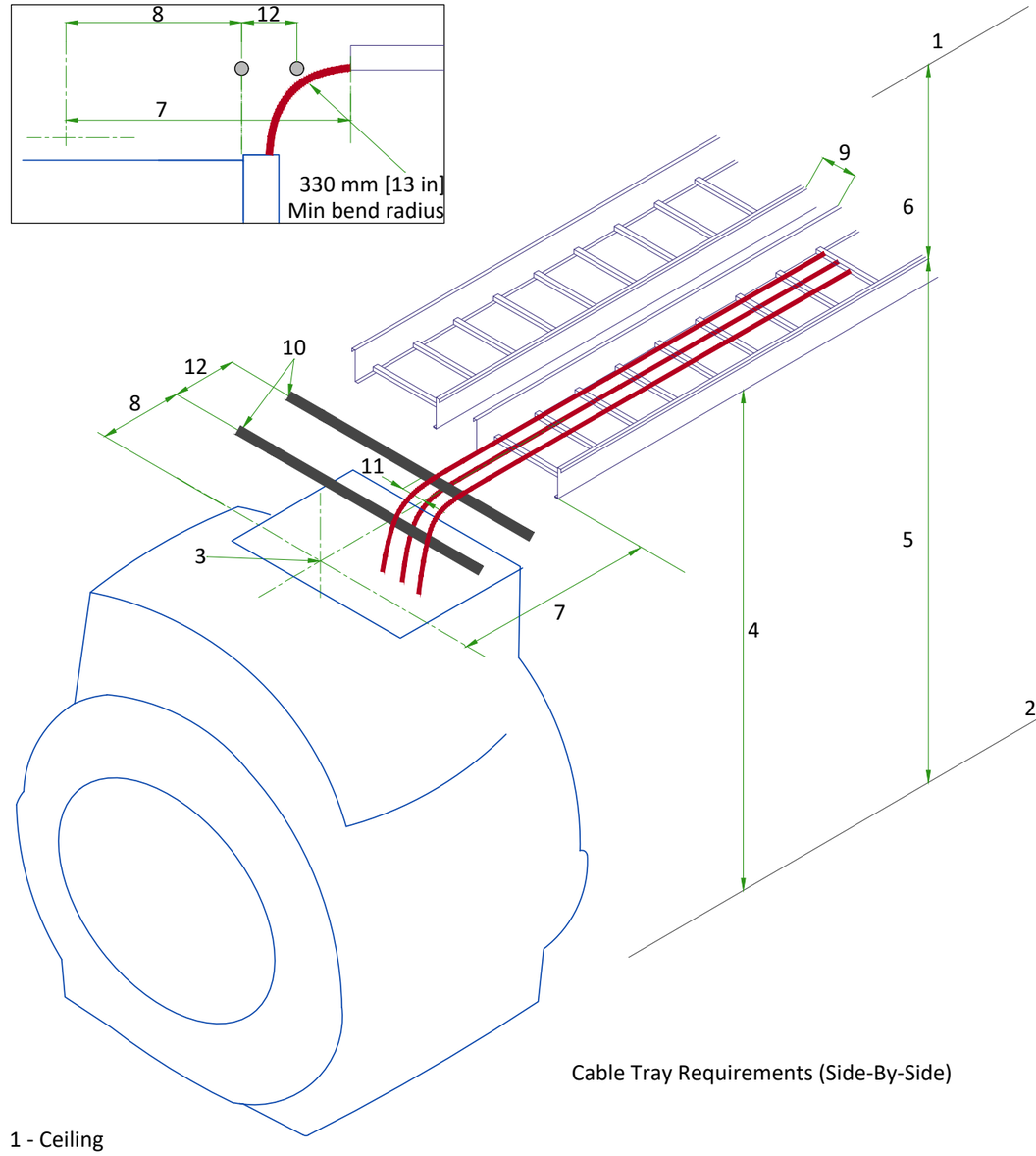
TYPICAL MAGNET ROOM GROUNDING

GROUNDING REQUIREMENTS

- All power lines into the RF shielded room require an RF filter.
- All electrical devices (for example, outlets, light fixtures, and so on) must have a ground wire from device power source and be grounded to the RF Shield at the RF Common Ground Stud.
- Resistance between any two grounded devices must not exceed 0.1 ohm to ensure equal potential ground system within the Magnet Room.
- Do not ground non-MR equipment to the MR ground system.
- The common ground stud must be installed near the penetration point(s) of the GE equipment, into the RF shield between the Equipment Room and Magnet Room.
- For additional information refer to RF Shielded Room manual 5850260-1EN



CABLE TRAYS REQUIREMENTS IN MAGNET ROOM



Cable Tray Requirements (Side-By-Side)

1 - Ceiling
2 - Finished Floor
3 - Magnet isocenter. Gradient cables must be centered on magnet isocenter.
4 - Minimum cable tray height required at back of Magnet: 2578 mm [101.5 in].
Tray height may be lower at other points to avoid obstructions.
5 - Maximum height from floor to top of tray (anywhere in Magnet room): 3251 mm [128 in].
6 - Minimum distance from top of cable tray to ceiling or other obstruction: 254 mm [10 in].
7 - Tray end to isocenter: 1336 ±12 mm [52.60 ±0.5 in].
8 - Other cable termination to isocenter: 955 ±12 mm [37.60 ±0.5 in] (IPM series).
9 - Minimum distance between trays: 12 mm [0.5 in].
10 - Non-ferrous cable support
11 - The center of the gradient cable group is 89 mm [3.5 in] from magnet center.
12 - Distance between non-ferrous cable support: ≤ 305 mm [12 in].

FULL SYSTEM UPS INTERCONNECT

480V Facility input power
3 Phase + GND

Output to imaging system MDP/PDB.
Refer to feeder table for wire size range of GE MDP. Customer to supply any required wire reduction solutions per local code.

Recommended AC Input Breaker

UPS Rating	Amps	Conductor Size
100 kW	200A	Min. 1 x 3/0 AWG
150 kW	300A	Min. 2 x 1/0 AWG
200 kW	400A	Min. 1 x 500 MCM

MBP Sidecar

Eaton UPS

Battery Cabinet

All cables are customer supplied unless otherwise specified.
Refer to the UPS ECAT Installation Support Documentation.

POWER REQUIREMENTS

SPECIFICATIONS OF MAIN POWER INPUT

POWER SUPPLY	**380/400/415/480V ±10%, 3 PHASE + GND**
FREQUENCIES	**380/400/415V at 50Hz ± 3Hz, 480V at 60Hz ± 3Hz**
TOTAL SYSTEM 50ms PEAK POWER	**129 kVA**
TOTAL SYSTEM CONTINUOUS POWER	**88 kVA**

- Governing electrical codes may require a neutral wire. If present, neutral must be terminated in MDP.
- Power input must be separated from any others which may generate transients (elevators, air conditioning, radiology rooms equipped with high speed film changers...).
- Total voltage harmonic distortion less than 2.5%. Phase imbalance must not exceed 2%.
- Lock-out/Tag-out: The Main Disconnect Panel (MDP) shall provide an external single point lock-out/tag-out feature for the entire system and a means to externally lock-out/tag-out each output breaker independently. Each lock-out/tag-out feature shall accommodate a standard sized lock hasp.

SPECIFICATIONS OF OPTIONAL BACK-UP POWER SUPPLY

MAGNET MONITOR REQUIRES A 100-240 VAC, 50/60 HZ, 3.0 A FACILITY SUPPLIED OUTLET. POWER AT THE OUTLET MUST BE CONTINUOUSLY AVAILABLE.

FOR CRYOCOOLER COMPRESSOR	
POWER INPUT	**380/400/415/480V, THREE-PHASE + G**
POWER REQUIREMENT	**MIN 9kVA**
POWER CONSUMPTION	**MAX 7.2kW / STEADY STATE 6.5kW at 50Hz** **MAX 8.3kW / STEADY STATE 7.5kW at 60Hz**
FREQUENCY	**380/400/415V at 50Hz ± 3Hz, 480V at 60Hz ± 3Hz**
Power to Cryocooler Compressor must be removed when emergency off circuit is actuated.	

CABLES

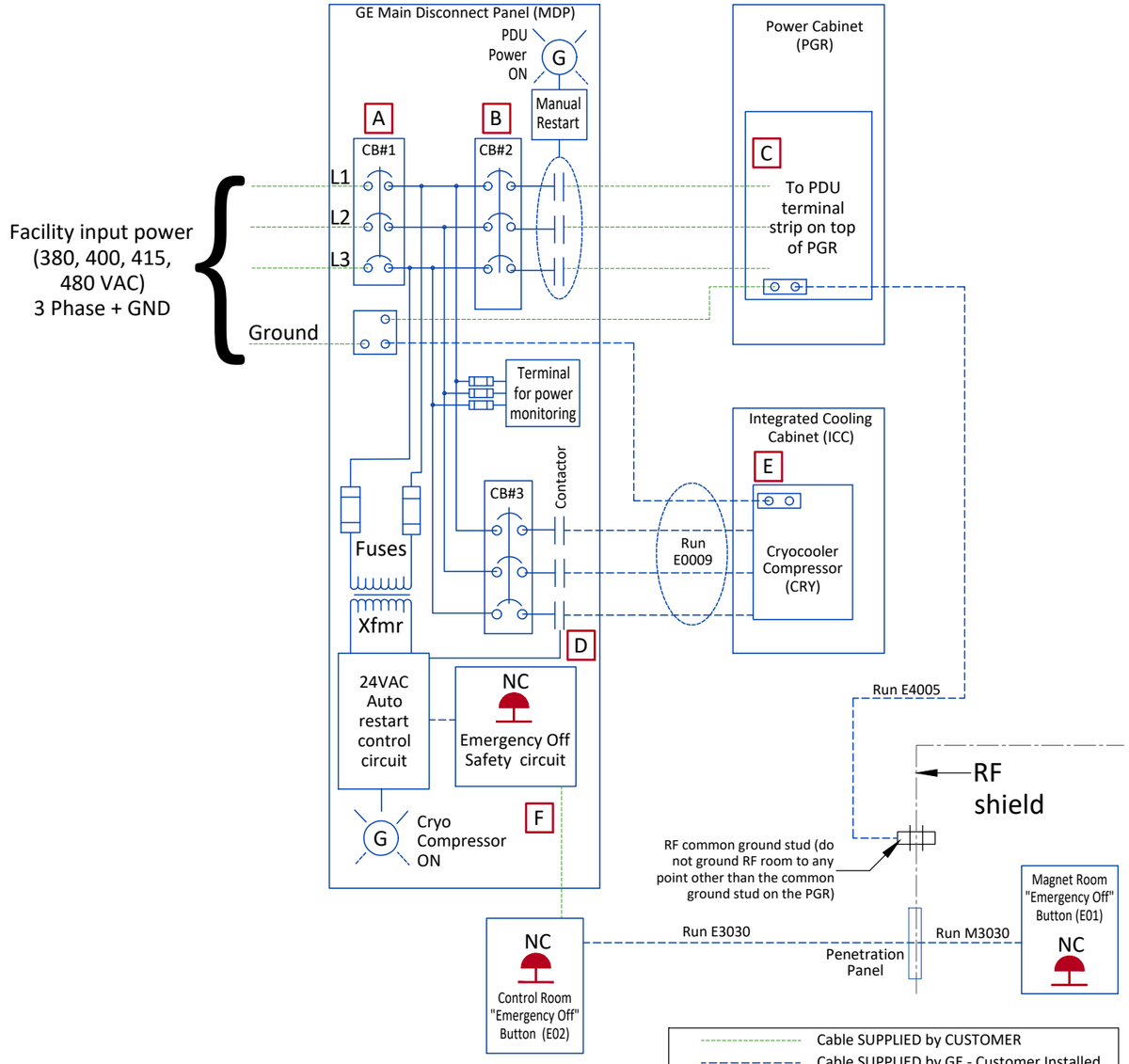
- Power and cable installation must comply with the distribution diagram.
- Size of the Main power input cable is determined by the customer, taking its length and admissible voltage drops into consideration.
- All cables must be isolated and flexible, cable color codes must comply with standards for electrical installation.
- The cables from signaling and remote control (Y,Emergency Off Buttons,L...) will go to Main Panel with a pigtail length of 1.5m [60in], and will be connected during installation.
- Each conductor will be identified and isolated (screw connector).

GROUND SYSTEM

- The equipotential link will be by means of an equipotential bar.
- The grounding point of MDP is directly connected to the building's ground by an isolated copper cable.
- The impedance of the earth bar should be less than or equal to 2 ohms.

GUIDANCE ON SLECTION OF FEEDER AND TRANSFORMER FOR MR SYSTEM			
	Direct feed from facility to MR system	MR system fed by dedicated facility distribution transformer	
Prerequisite Conditions			
MR System Incoming Voltage	480V 3-phase		
Minimum Source short-circuit kVA	7,900 kVA (at source of feeder to MDP)	8,325 kVA (at input to distribution transformer)	
Minimum No-Load Voltage	460V	475V (transformer secondary tapped accordingly)	
Feeder and Transformer Recommendations			
Dedicated Distribution Transformer Recommendations	N/A	Size: 225 kVA Impedance (Z): ≤5% K-Factor: ≥ K=20 200A overcurrent protection on secondary*	Size: 225 kVA Impedance (Z): ≤4% K-Factor: ≥ K=20 200A overcurrent protection on secondary*
Maximum Feeder Length*	280 ft	150 ft	240 ft
Feeder Size - 3-phase power conductors*	3/0 AWG Cu	3/0 AWG Cu	
Feeder Size - Ground (USA)*	6 AWG Cu (equipment grounding conductor)	4 AWG Cu (supply side bonding jumper) 6 AWG Cu (equipment grounding conductor)	
Feeder Size - Ground (Canada)*	6 AWG Cu (bonding conductor)	6 AWG Cu (bonding conductor)	
* NOTE: Recommendations shown apply only to cases defined exactly as shown in this table and when not in conflict with local electrical codes . For all other cases, refer to the local codes and the System Voltage Regulation Calculator located on the GE Healthcare Site Planning Website			

POWER DISTRIBUTION



NOTES:

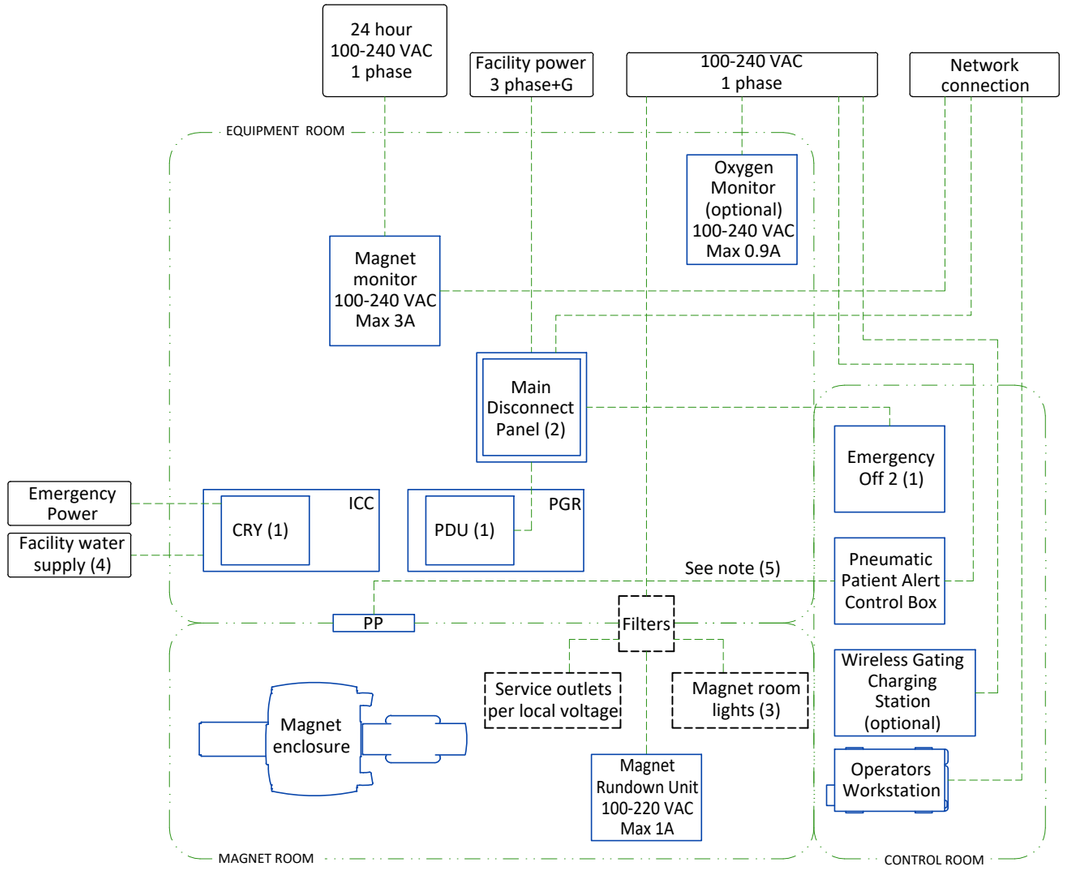
1) Cryocooler Compressor (CRY) must operate 24 hours per day, 7 days per week.
2) Runs E0009, E3030 and M3030 are GE supplied cables. All other wiring is customer supplied and installed.
3) Two remote Emergency Off Maintained Buttons are supplied with the MDP. Emergency Off removes power from all outputs when activated.
4) All MDP output circuits drop out on loss of power. the Cryocooler (CRY) circuit will automatically restart upon restoration of power.
5) MDP Short circuit current rating is 25,000 amperes at 480 VAC.
6) MDP is NRTL labeled.
7) All feeder circuits require dedicated ground wires.

CB	MDP
1	200 A
2	150 A
3	25 A

Accepts following range of standard stranded conductors. All wire types, color and sizing to be selected in accordance with governing electrical code(s).

GE MDP M7100ZA 380V-480V				
Item	Phase		Ground	
	sq mm	AWG/kcmil	sq mm	AWG/kcmil
A	6-120	10-250	16-120	6-250
B	10-120	8-250	35-120	2-250
C	2.5-70	14-2/0	2.5-70	14-2/0
D	2.5-4	14-10	2.5-16	14-10
E	2.5-6	14-10	2.5-6	14-10
F	0.5-10	22-10	-	-

FACILITY SUPPLIED WIRING



This diagram displays minimum power requirements for GE equipment and should be used as a guide to determine appropriate wire sizes per local regulatory requirements.

CRY	Cryocooler Compressor (Inside ICC)
ICC	Integrated Cooling Cabinet
PDU	Power Distribution Unit (inside PGR)
PGR	Power, Gradient, RF Cabinet
PP	Penetration Panel

Notes :

(1) Refer to Power Distribution detail for more information

(2) Size incoming wires from GE equipment according to conductor sizes listed on Power Distribution detail.
A network connection must be provided near the MDP to support power quality monitoring.

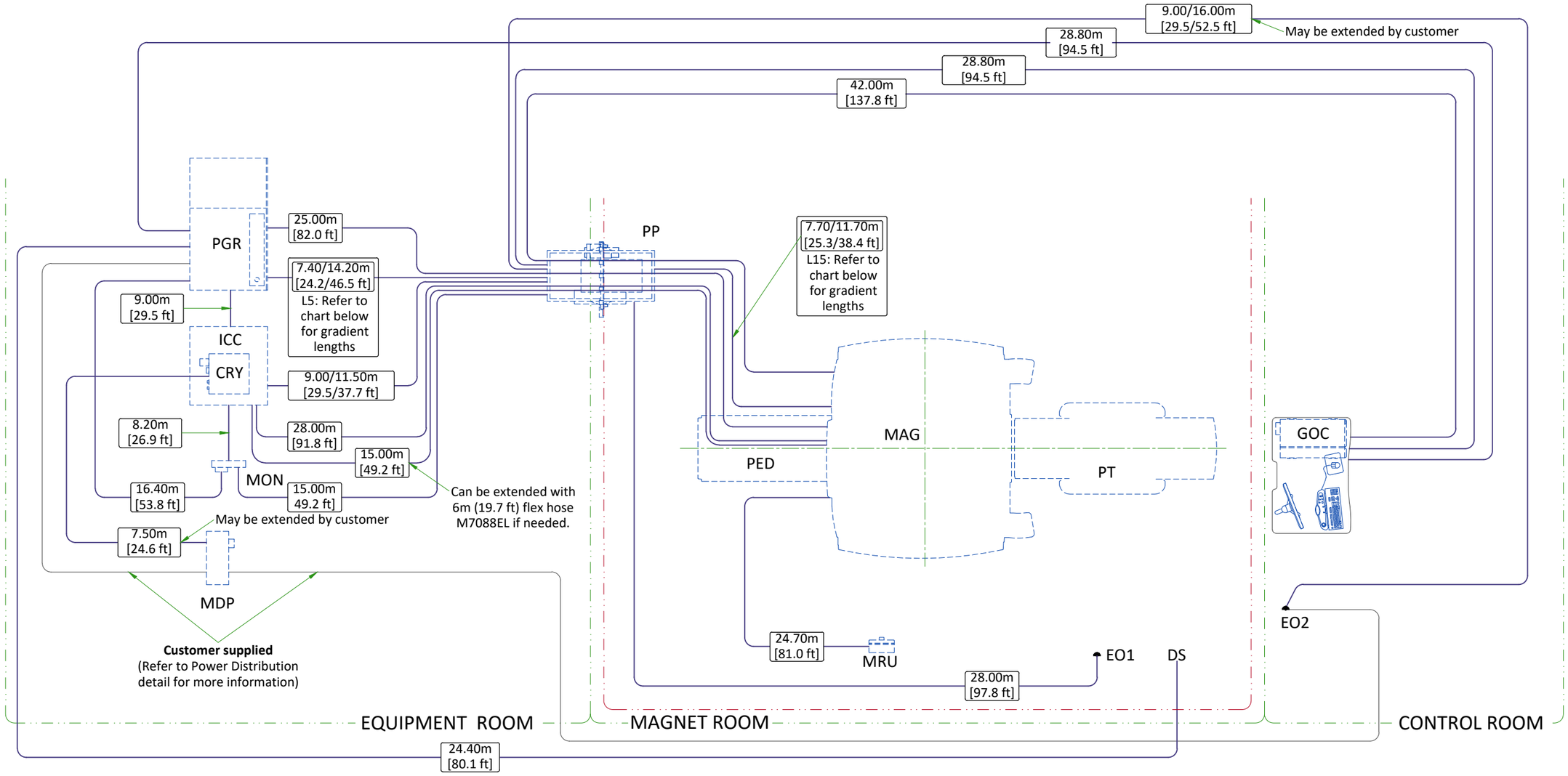
(3) Refer to Lighting Requirements detail

(4) This group contains water lines which shall be routed separate from electrical lines (I.E. power and signal)

(5) A cable is supplied by GE but may be extended if needed.

- Cable SUPPLIED BY CUSTOMER
- Equipment SUPPLIED BY GE
- Equipment SUPPLIED BY CUSTOMER

INTERCONNECTIONS



GRADIENT CABLE LENGTH OPTIONS

Length Identifier	Available lengths m (ft)	Proposed
L5 (Equipment Room)	3.7 (12.9)	-
	5.7 (18.7)	-
	7.7 (25.3)	-
	9.7 (31.8)	-
	11.7 (38.4)	-
	13.7 (45.0)	-
	15.7 (51.5)	-
L15 (Magnet Room)	4.6 (15.1)	-
	6.6 (21.6)	-
	8.6 (28.2)	-
	10.6 (34.7)	-
	12.6 (41.3)	-

CABLE ROUTING FOR ACCESSORIES

OPTION	FROM	TO	CABLE LENGTH m (ft)
Magnetic Resonance Elastograpy (MRE)	MRE	Magnet (Isocenter)	Nominal: 7.31 (24) Maximum: 10.06 (33)
	MRE	PP	15.24 (50)
	MRE	Ethernet Hub in PGR	15.24 (50)
	MRE	Customer Supplied Outlet	60Hz: 6.10 (20) 50Hz: 7.62 (25)
Multi-Nuclear Spectroscopy (MNS)	MNS	PGR	9.85 (32.3)
	MNS	PGR	7.85 (25.7)/14 (45.9)
	PP	PGR	8.2 (26.9)/14.35 (47)
Brainwave (BW)	BW	PP	18.3 (60)

GENERAL NOTE: PMI must validate proposed selectables and send confirmation to OTR. Refer to MyProjects if Proposed field is blank.
GOLDSEAL/SILVER PREFERRED NOTE: Cable lengths listed may differ from what is shipped with the system. Contact the Goldseal group for actual lengths to be delivered.
ROOM MOVE NOTE: Cable lengths listed may differ from what is included with reinstalled system. Contact the local field engineer for actual lengths to be delivered.

Order Configuration Options

Configuration	Equipment Room - site option	Magnet Room - site option	Proposed
A	Short	Short	-
B	Long	Short	-
C	Short	Long	-

UNIVERSAL SHIELDING CORP.

20w. JEFRYN BOULEVARD
DEER PARK, N.Y. 11729
PHONE {631} 667-7900 FAX {631} 667-7912
E-MAIL: INFO@UNIVERSALSHIELDING.COM
WEB ADDRESS: WWW.UNIVERSALSHIELDING.COM

CUSTOMER:

-

PROJECT:

-

GE
GE FINAL INSTALLATION
DRAWING # 000000 REV 00
PIM-0000000
USC-00000N

PROJECT MANAGER:
NAME: ALFONSO NOCERA
PHONE#: 1-631-667-7900

DRAWING NUMBER
US-1

GENERAL NOTES

1. ALL OUTSIDE DIMENSIONS (OD) ARE TO THE EXTERIOR WALLS AND/OR CEILING OF THE RF ENCLOSURE.

2. PARENT ROOM FLOOR MUST BE FLAT AND LEVEL WITHIN 1/4" EVERY 10'-0" (NON-ACCUMULATIVE) NOT BY UNIVERSAL SHIELDING CORP.

3. A SLAB DEPRESSION IS REQUIRED TO ACHIEVE A SILL LEVEL WITH ADJACENT ROOM OR HALLWAY FLOOR FINISH. SEE DOOR DETAIL FOR DEPRESSION OF SLAB NOT BY UNIVERSAL SHIELDING CORP. (SEE DOOR DETAIL)

4. PARENT ROOM FLOOR MUST BE FREE OF ANY OBSTRUCTIONS!

5. TO INSURE AGAINST GROUNDING, A 2" MINIMUM CLEARANCE IS REQUIRED BETWEEN RF ENCLOSURE AND BUILDING CONSTRUCTIONS.

6. LOCATION OF ISO CENTER SHALL NOT BE DETERMINED BY UNIVERSAL SHIELDING CORP.

7. FINAL FABRICATION CANNOT BE COMPLETED UNTIL DRAWINGS ARE APPROVED!

8. THE RF ENCLOSURE CEILING SYSTEM IS TYPICALLY SUPPORTED BY PARENT ROOM OVERHEAD CONSTRUCTION WITH THE USE OF DIELECTRICALLY ISOLATED, ADJUSTABLE HANGERS. THE RF CEILING LOADS ARE APPROXIMATELY 5,5 LBS PER SQ. FT EXCLUSIVE OF INTERIOR SUSPENDED CEILINGS, LIGHTING AND DUCTWORK. IT IS THE RESPONSIBILITY OF THE OWNER TO INSURE THAT THE OVERHEAD CONSTRUCTION WILL ADEQUATELY SUPPORT THE RF ENCLOSURE CEILING.

9. THE CUSTOMER OR CONTRACTOR MUST PROVIDE A CLEAN, DRY STAGING AREA FOR LAYOUT AND STORAGE OF RF ROOM COMPONENTS AS CLOSE AS POSSIBLE TO THE RF ENCLOSURE INSTALLATION SITE.

10. UNIVERSAL SHIELDING CORP. INSTALLATION CREWS SHALL REQUIRE A MINIMUM OF TWO (2) SERVICE CONNECTIONS FOR DROP CORDS. (117VAC, 20 AMP).

11. THE CONTRACTOR/OWNER TO PROVIDE REFUSE CONTAINERS FOR THE DISPOSAL OF EXPENDABLE MATERIALS FROM THE RF ENCLOSURE INSTALLATION SITE. THE CONTRACTOR/OWNER SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE REFUSE CONTAINERS.

12. AT THE COMPLETION OF THE BASIC ENCLOSURE, THE UNIVERSAL SHIELDING CORP. INSTALLATION SUPERVISOR WILL PERFORM AN ISOLATION TEST TO DEMONSTRATE THAT THE RF ENCLOSURE IS ISOLATED FROM GROUND BY A MINIMUM OF 1,000 OHMS, DURING THE INSTALLATION OF THE VARIOUS SYSTEMS. INTO THE RF ENCLOSURE, AN INDIVIDUAL SHOULD BE DESIGNATED TO CHECK THE ISOLATION OF THE RF ENCLOSURE DURING THE DAY. UNIVERSAL SHIELDING CORP. RECOMMENDS THIS TEST TO BE PERFORMED APPROXIMATELY FOUR (4) TIMES DAILY. IF A GROUND IS DETECTED, IT CAN BE FOUND BY REVIEWING THE ADDITIONAL SYSTEMS THAT WERE INSTALLED INTO THE RF ENCLOSURE AFTER THE LAST SUCCESSFUL TEST.

13. DO NOT PENETRATE RF PANELS MORE THAN 5/8" WHEN ATTACHING INTERIOR FINISHES. THESE SCREWS SHOULD BE NON-MAGNETIC STAINLESS STEEL OR AS OTHERWISE SPECIFIED BY THE MRI EQUIPMENT VENDOR. INTERIOR FINISH SCREWS SHOULD NOT PENETRATE OR ATTACH TO THE RF FRAMING SYSTEM. DO NOT PENETRATE BOTH STEEL SKINS OF RF PANEL UNDER ANY CIRCUMSTANCES WITHOUT THE APPROVAL OF UNIVERSAL SHIELDING CORP!

14. IF METAL STUDS ARE USED FOR INTERIOR ROOM FRAMING, THEY MUST BE ISOLATED FROM DIRECT CONTACT TO THE RF WALLS BY INSULATORS OR AIRSPACE.

15. GEHC RECOMMENDS A WATERPROOF FINISH (LACQUER ETC.) ON THE RF FLOOR AND ESPECIALLY IN THE MAGNET RECESS AND TRENCH DUCT . (NOT BY UNIVERSAL SHIELDING CORP.)

FIRE RATING

THE NATIONAL FIRE PROTECTION ASSOCIATION LIFE SAFETY CODE 101, SECTION 6-2, "INTERIOR FINISHES", HAS A CLASSIFICATION OF MATERIALS WITH RESPECT TO FLAME SPREAD AND SMOKE DEVELOPED.

THE CLASSIFICATIONS ARE AS FOLLOWS:

CLASS A INTERIOR FINISH: FLAME SPREAD 0-25;
SMOKE DEVELOPED 0-450

CLASS B INTERIOR FINISH: FLAME SPREAD 26-75;
SMOKE DEVELOPED 0-450

CLASS C INTERIOR FINISH: FLAME SPREAD 76-200;
SMOKE DEVELOPED 0-450

INTERIOR FINISH MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH NFPA 255, "METHOD OF TEST OF SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS" (ASTM E84).

OUR PANELS TESTED JANUARY 12 1987, RECEIVED A FLAME SPREAD OF 0, IT WOULD FALL INTO THE CLASS A INTERIOR FINISH CATEGORY IN ACCORDANCE WITH NFPA 101, SECTION 6-2.

RF PANELS

RF PANELS SHALL CONSIST OF 26 GA. GALVANIZED STEEL BONDED TO A WOOD CORE TYP FLOOR WALLS & CEILING UNLESS NOTED OTHERWISE

ACCESSORY SCHEDULE

RFI/EMI SHIELDED DOOR

DOOR#	
QUANTITY	1
SIZE	$46\frac{1}{2}$" x 84"
TYPE	RCM-154FS
SWING	RHI OR LHI RHO OR LHO
FINISH	UNSTAINED RED OAK
SILL TYPE	FLUSH SILL
LOCK	KEY CYLINDER DOOR LOCK AND SWITCH

RFI/EMI WINDOW

QTY	SIZE: {WIDTH x HEIGHT} {CLEAR VIEW}
1	4'-0" x 3'-0" CONTROL ROOM WINDOW
-	-
-	-

INTERIOR EYEBOLTS

UNIVERSAL SHIELDING CORP. WILL SUPPLY EYEBOLTS {1/4"-20 X 3/4" INNER DIAMETER} ON A GRID OF 4'-0" X 4'-0".
FOR ENTIRE RF ENCLOSURE CEILING TO SUSPEND ACOUSTICAL CEILING.

FILTER BOX

1. USC TO INSTALL MAGNET VENDOR SUPPLIED FILTER BOX AT THE TIME OF MAGNET INSTALLATION.

2. RF ENCLOSURE WILL BE TESTED PRIOR TO AND AFTER FILTER BOX AND MAGNET INSTALLATION. TESTING BY UNIVERSAL SHIELDING CORP.

MAGNETIC SHIELDING (AS REQUIRED)

USC TO PROVIDE AND INSTALL ARMCO M36 FULLY PROCESSED NON-ORIENTED SILICON STEEL AS MAY BE REQUIRED ON GE DRAWINGS, SHIELDING SHEETS SH1, SH2. SEE USC SHEET 3 FOR LOCATIONS AND THICKNESSES.

LAPPING PLATES WILL BE UTILIZED AS DEFINED ON GE SHEET SH2 AT SEAMS AND CORNERS.

RFI/EMI ELECTRICAL FILTERS

QTY	PART #	RATING	USE
TBD	USC 50-2x30	30 AMPS	POWER & LIGHTING
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

NOTE: INSTALLATION BY UNIVERSAL SHIELDING CORP.
WIRING BY OTHERS.

SEE FILTER DETAILS FOR SPECIFICATIONS.

PIPE PENETRATIONS

	QTY	TYPE	SIZE	USE
	TBD	TBD	TBD	SPRINKLER
	TBD	TBD	TBD	SINK
MED GAS	1	COPPER	3/4"	V
MED GAS	1	COPPER	1/2"	A
MED GAS	1	COPPER	1/2"	O_2

NOTE: EXTERNAL DIELECTRIC CONNECTIONS ARE NOT PROVIDED OR INSTALLED BY UNIVERSAL SHIELDING CORP.

GROUNDING

UNIVERSAL SHIELDING CORP. TO PROVIDE AND INSTALL ONE {1} 3/8"-16 DIAMETER GROUND STUD WITH TWO(2) BRASS GROUNDING BARS AS CLOSE AS POSSIBLE TO THE PENETRATION PANEL. SEE SHEET 4, DETAIL 10.

RF ENCLOSURE TO REMAIN ISOLATED FROM GROUND BY A MINIMUM OF 1,000 OHMS AS SPECIFIED BY GE MEDICAL SYSTEMS.

USC TO PROVIDE A GROUND ISOLATION MONITOR TO BE CONNECTED TO RF ENCLOSURE AT ALL TIMES DURING CONSTRUCTION AND INTERIOR FINISH WORK.

REFER TO GE SHEET E3 ELECT 52 & 53

MAGNET ENTRY

UNIVERSAL SHIELDING CORP. TO PROVIDE A REMOVABLE WALL/CEILING SECTION FOR MAGNET ENTRY SEE SHEET 3 FOR LOCATION.

REMOVABLE/QUICK-CLOSE R.F. PANELS WILL ALLOW FOR FUTURE MAGNET REMOVAL.

WAVEGUIDE AIRVENTS

QTY	TYPE	SIZE	COLLARS
TBD	SUPPLY	TBD	BOTH SIDES
TBD	RETURN	TBD	BOTH SIDES
TBD	PRESSURE EQUALIZER	24"x24"	BOTH SIDES
TBD	EXHAUST FAN	TBD	ONE SIDE
-	-	-	-
-	-	-	-

CRYOGEN PIPE PENETRATION

QTY	SIZE
1	8"Ø ALUMINUM
-	-

PENETRATION PANEL

1. USC TO INSTALL MAGNET VENDOR SUPPLIED PENETRATION PANEL FRAMES. FINAL R.F. TEST BE WITNESSED BY THE GE FIELD ENGINEER AND THE TEST REPORT DELIVERED TO THE GE PROJECT MANAGER

2. RF ENCLOSURE WILL BE TESTED PRIOR TO AND AFTER PENETRATION PANEL AND MAGNET INSTALLATION. TESTING BY UNIVERSAL SHIELDING CORP.

3. USC TO PROVIDE & INSTALL BLANK R.F. PANEL(S) AND REQUIRED HARDWARE FOR TWO (2) R.F. TESTS. PRIOR TO GE PENETRATION PANEL INSTALLATION.

GE RF SHIELDING SPECIFICATION

RF ENCLOSURE MUST PROVIDE A MINIMUM OF 100 DB OF SHIELDING EFFECTIVENESS (SE) FOR THE ENTIRE ROOM AT THE FOLLOWING FREQUENCIES: 51, 63.86, AND 76,6 MHz. ADDITIONAL TESTING OF 100 DB SE AT 102.20, 127.72, AND 153.30 MHz IS RECOMMENDED FOR ALL NEW CONSTRUCTION TO ACCOMMODATE FUTURE UPGRADES.

REFER TO GE PRE-INSTALLATION MANUAL AND GE FINAL INSTALLATION DRAWINGS

VINYL FILLER TILE

ONE {1} LAYER OF 1/8" THK TILE BONDED TO TOP OF RF FLOOR PANEL TO ACHIEVE A LEVEL FLOOR SURFACE FOR FLOOR FINISHES.

RF. ENCLOSURE UNDERLAYMENT

ONE {1} THK 1/8" THK HARDBOARD SHIMMING LAYER AND ONE {1} 1/8" THK HARDBOARD LEVELING LAYER OVER ONE {1} LAYER OF 6 MIL. THK POLYVINYL MOISTURE BARRIER.

OPERATION & MAINTENANCE

1. OPERATING PROCEDURES:

UPON COMPLETION OF THE INSTALLATION OF THE RF SHIELDED ENCLOSURE, TO GAIN ENTRANCE AND EXIT FROM THE ENCLOSURE, ONE ROTATES THE DOOR HANDLE IN A CLOCKWISE OR COUNTERCLOCKWISE DIRECTION RESPECTIVELY. THE DOOR MUST BE IN THE FULLY CLOSED AND LATCHED POSITION TO MAINTAIN SHIELDING INTEGRITY.

2. MAINTENANCE PROCEDURES:

1. THE FOLLOWING MAINTENANCE PROCEDURES SHOULD BE FOLLOWED.

2. CLEAN THE BRASS KNIFE EDGE ON THE DOOR ONCE WEEKLY WITH A SOFT CLOTH AND ALCOHOL.

3. SPRAY DC-26 LUBRICANT ON THE BERYLLIUM COPPER FINGERS LOCATED ON THE DOOR ONCE WEEKLY.

4. IF THE DOOR SHOULD REQUIRE ADJUSTMENT, THE HINGES ARE ADJUSTABLE FOR HORIZONTAL AND VERTICAL ALIGNMENT.

5. HONEYCOMB AIR WAVEGUIDE DUCTS SHOULD BE CLEANED YEARLY WITH A SMALL BRUSH IF AIR FLOW BECOMES RESTRICTED.

6. IF LIQUIDS ARE SPILLED IN A SHIELDED ENCLOSURE AND BECOME LODGED BETWEEN THE FRAMING MEMBERS AND PANELS IT WILL CAUSE A DEGRADATION OF THE ENCLOSURE SHIELDED PROPERTIES. IT IS IMPERATIVE THAT THE FOLLOWING ITEMS BE FOLLOWED.

A. NO FOOD OR LIQUIDS (SODA, COFFEE, ETC.) BE CONSUMED WITHIN THE ENCLOSURE.

B. NO WET CLOTHES OR SHOES BE WORN IN THE ENCLOSURE.

C. NO BURNING OR WELDING SHOULD BE PERFORMED WITHIN THE ENCLOSURE.

D. CLEAN ANY OIL OR FLUID FROM PIPES TO BE USED BEFORE IT ENTERS THE ENCLOSURE.

7. IF A COMPUTER FLOOR IS INSTALLED IN THE ENCLOSURE, THE TILE SURFACE CANNOT BE CLEANED WITH ANY LIQUID THAT WOULD SPILL ONTO THE ENCLOSURE FLOOR.

8. DO NOT ALLOW ANY UNAUTHORIZED PENETRATIONS OF THE RF ENCLOSURE TO OCCUR.

9. IF THE PARENT ROOM CEILING IS QUESTIONABLE, PRECAUTIONS SHOULD BE TAKEN TO PROTECT THE RF ENCLOSURE CEILING. ALL FRAMING JOINTS SHOULD BE TAPED.

3. TROUBLESHOOTING PROCEDURES:

IF ATTENUATION LOSS OCCURS, THE FOLLOWING ITEMS SHOULD BE OBSERVED.

1. NO UNAUTHORIZED PENETRATION(S) WAS MADE, I.E., UNFILTERED WIRE OR PIPING.

2. CHECK THAT ALL DOOR FINGERSTOCK IS IN PLACE AND NOT DEFORMED.

3. CHECK THAT NO SCREWS WERE LOOSENED OR REMOVED.

4. ALLOWABLE LOADS:

1. THE ALLOWABLE LOADS ON TOP OF THE RF ENCLOSURE CAN BE 10 LBS. PER. SQ. FT. AND THE WEIGHT MOUNTED ON SHELVES OR WALLS IS 85 LBS.

LEGEND

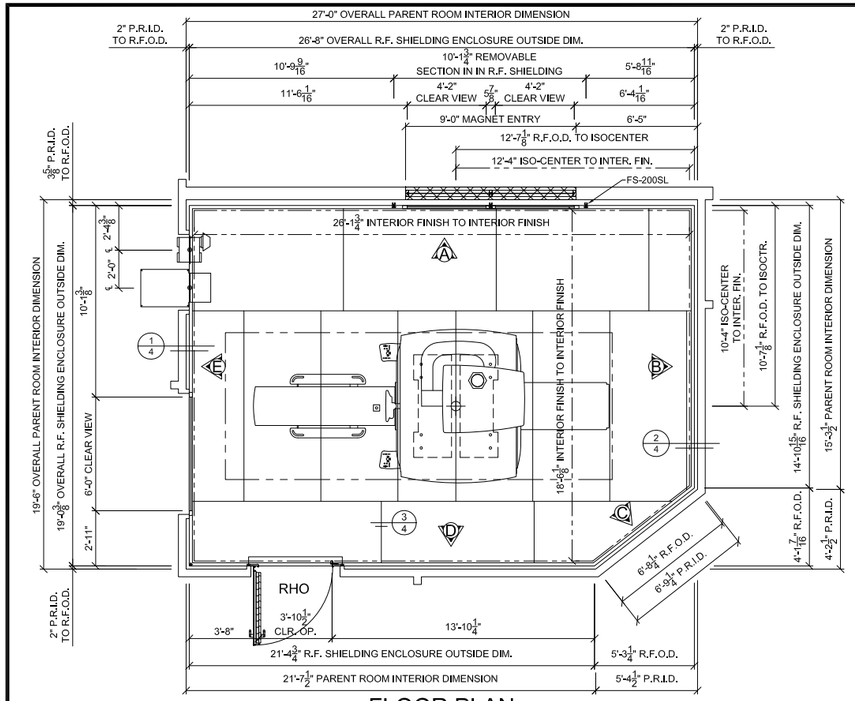
OD - OUTSIDE DIMENSION
ID - INSIDE DIMENSION
OA - OVERALL
HT - HEIGHT
℄ - CENTERLINE
V.I.F. - VERIFY IN FIELD
P.R. - PARENT ROOM

DETAIL NUMBER
REFER TO SHEET

B/O - BY OTHERS
T.B.D. - TO BE DETERMINED
CLR VW. - CLEAR VIEW
CLR OP. - CLEAR OPENING
- MAGNET ISOCENTER

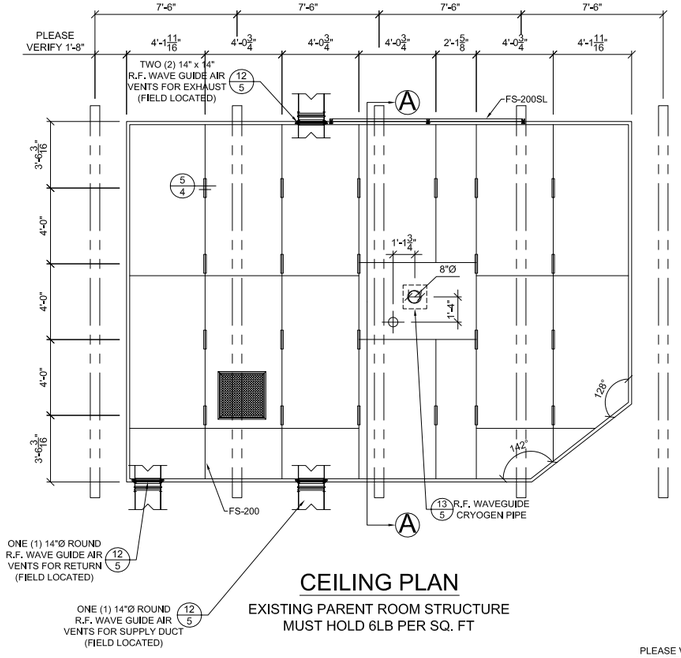
MATERIAL: -	FINISH: -	HEAT TREAT - / WEIGHT -	
MAGNET: GE OPTIMA MR450W 1.5T	TITLE: STANDARD DRAWINGS	UNIVERSAL SHIELDING CORP.	
SCALE: N.T.S.	DRAWN: ALFONSO DATE: -	SIZE: D	DRAWING NUMBER: US-2
REVISED: -	CHECKED: - DATE: -		ISSUE: -
	APPROVED: - DATE: -		

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVAL
-	PRELIMINARY DRAWING	-	-
-	-	-	-



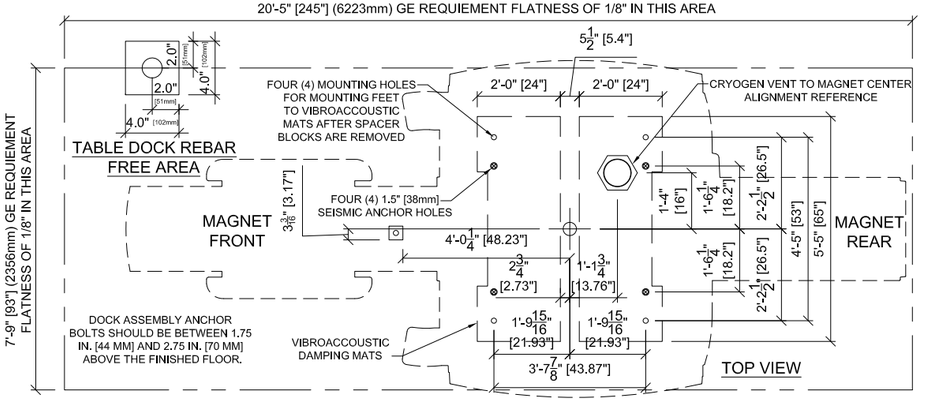
FLOOR PLAN

NOTE: CONCRETE FLOOR IN THE AREA OF THE GE MAGNET, TABLE, AND REAR PEDESTAL, MUST HAVE A FLATNESS/LEVELNESS OF NO MORE THAN 1/8" BETWEEN HIGH AND LOW SPOTS. (BY OTHERS)

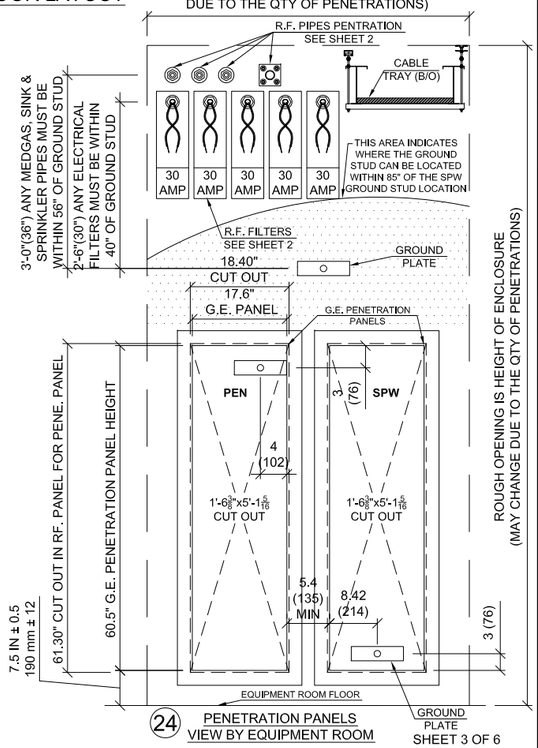


CEILING PLAN

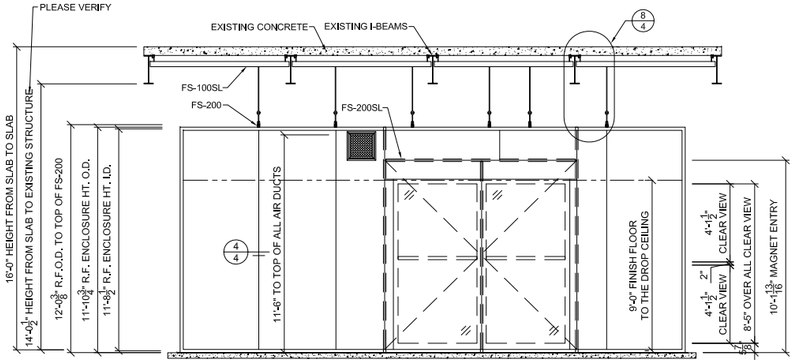
EXISTING PARENT ROOM STRUCTURE MUST HOLD 6LB PER SQ. FT



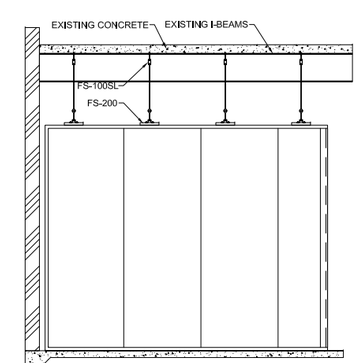
24 GE OPTIMA MR450w FLOOR LAYOUT



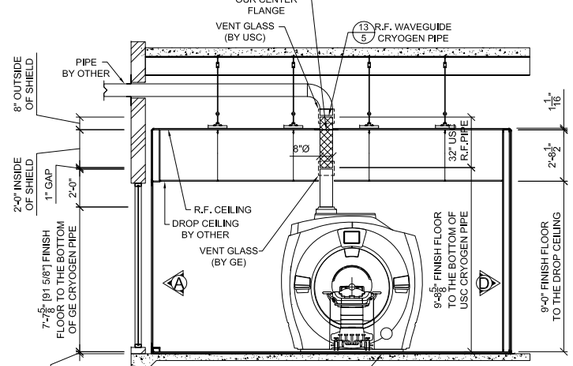
24 PENETRATION PANELS VIEW BY EQUIPMENT ROOM



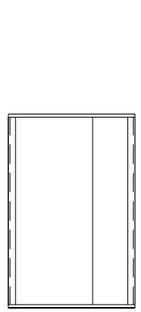
INSIDE ELEVATION "A"



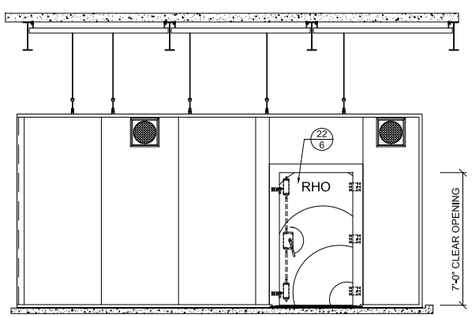
INSIDE ELEVATION "B"



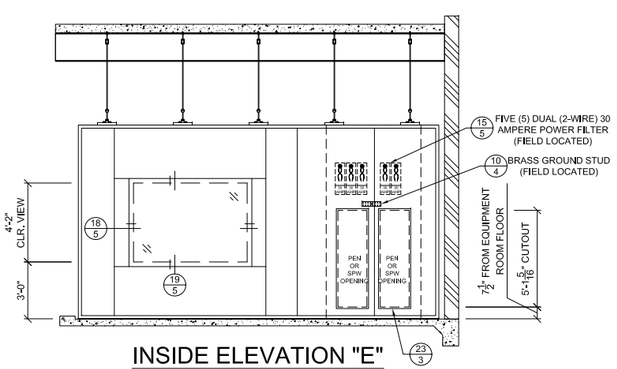
SECTION A-A (INSIDE ELEVATION VIEW FOR CRYOGEN PIPE)



INSIDE ELEVATION "C"

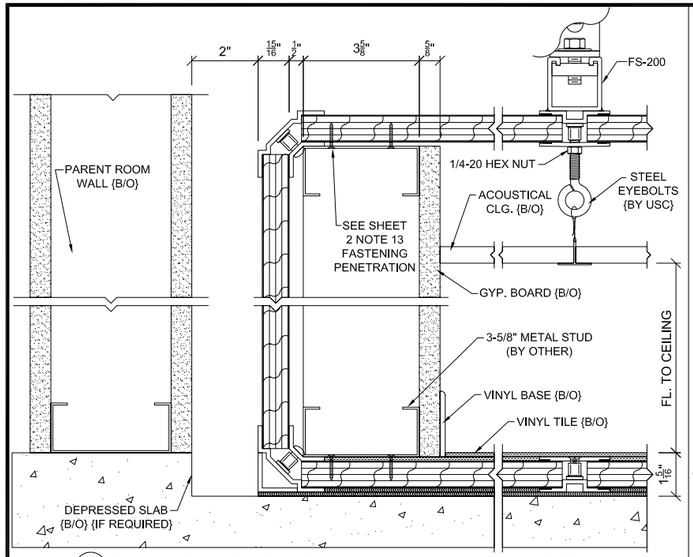


INSIDE ELEVATION "D"

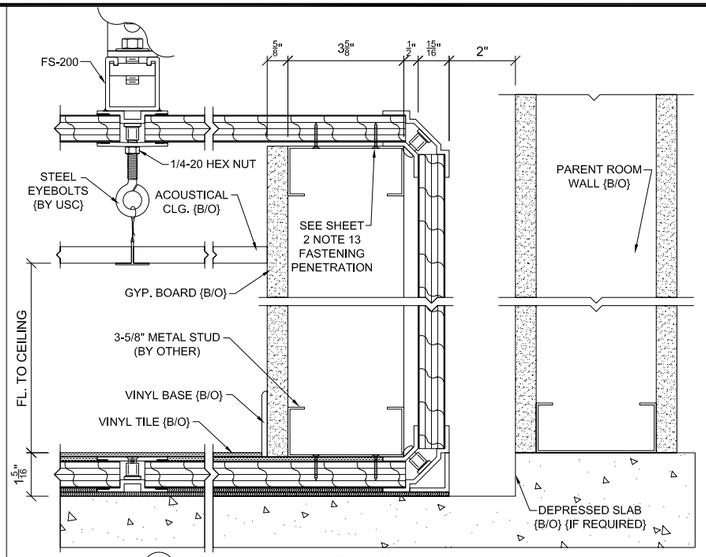


INSIDE ELEVATION "E"

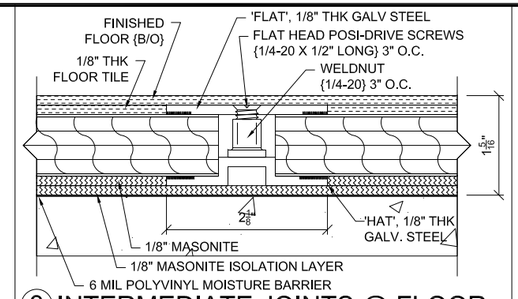
MATERIAL: -	FINISH: -	HEAT TREAT -	
MAGNET: GE OPTIMA MR450W 1.5T	TITLE: STANDARD DRAWINGS	WEIGHT -	UNIVERSAL SHIELDING CORP.
SCALE: 1/4"=1'-0"	DRAWN: ALFONSO DATE: -	SIZE: D	DRAWING NUMBER: US-3
REVISED: -	CHECKED: - DATE: -		ISSUE: -
	APPROVED: - DATE: -		



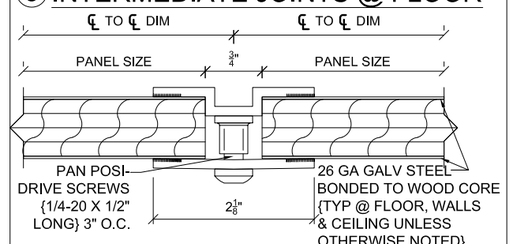
1 RF ENCL SECTION W/ METAL STUDS



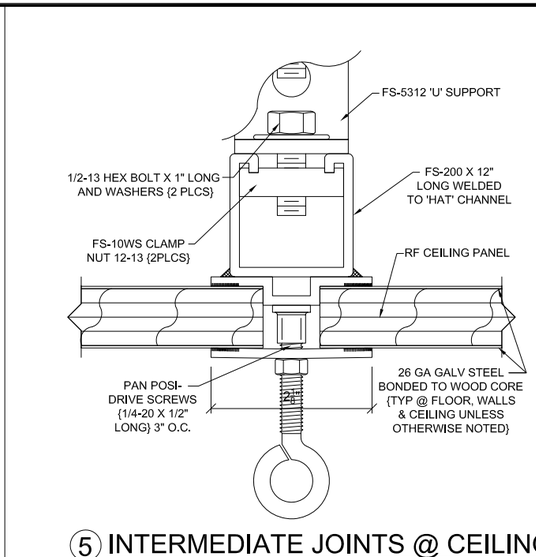
2 RF ENCL SECTION W/ METAL STUDS



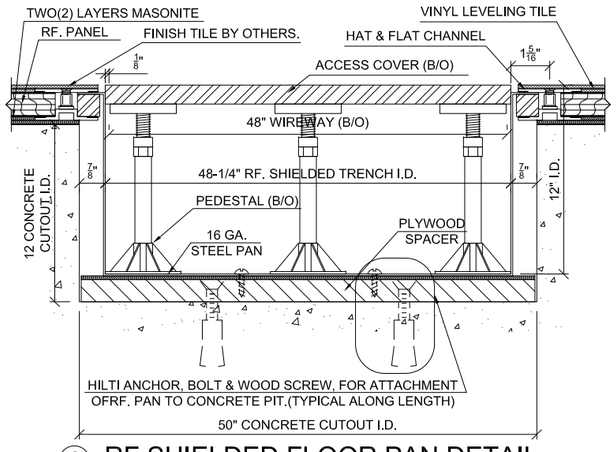
3 INTERMEDIATE JOINTS @ FLOOR



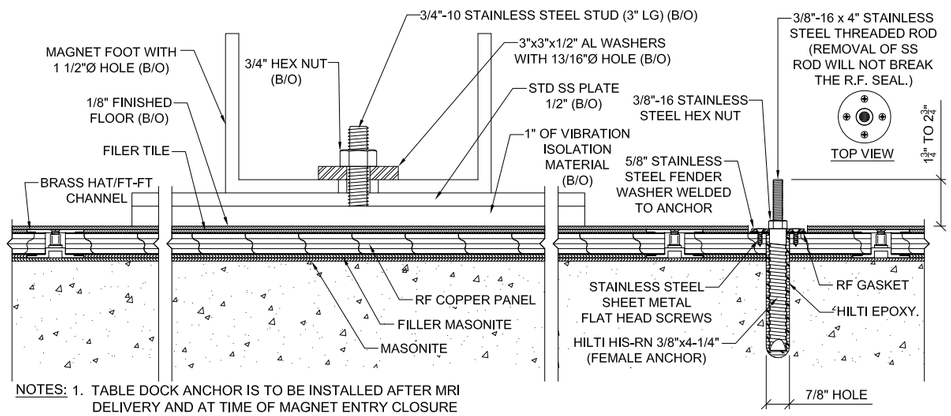
4 INTERMEDIATE JOINTS @ WALLS



5 INTERMEDIATE JOINTS @ CEILING

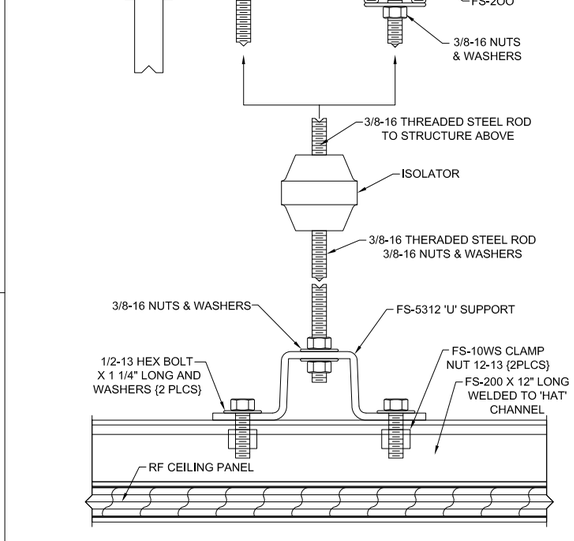


6 RF SHIELDED FLOOR PAN DETAIL

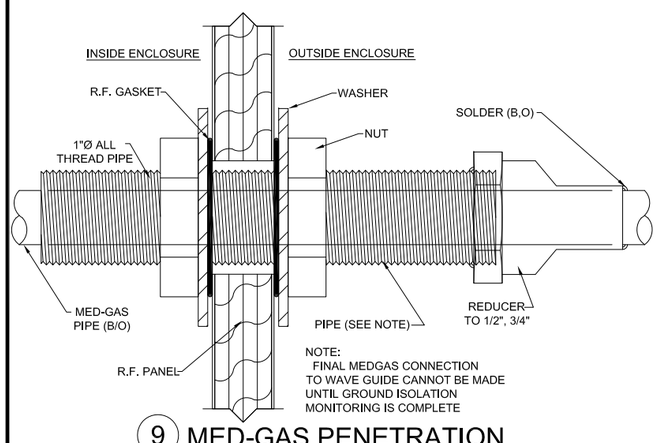


NOTES:
1. TABLE DOCK ANCHOR IS TO BE INSTALLED AFTER MRI DELIVERY AND AT TIME OF MAGNET ENTRY CLOSURE
2. THERE IS ONE SEAM BETWEEN THE VIBROPADS AND NO SEAM OR JOINTS BELOW THE VIBROPADS.
3. ANCHOR TO HAVE 600 LBS. CLAMPING FORCE (18 FT LBS. TORQUE) SEE GE DRAWING SHEET S2 AND GE SITE PLANNING GUIDE, CHAPTER 3, SECTION 5.3.3, SUB-AREA 51.

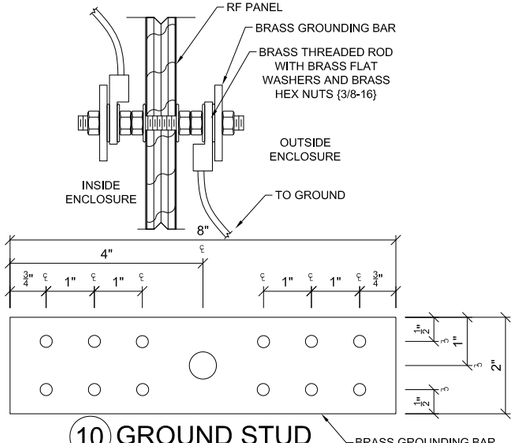
7 VIBROACOUSTIC DAMPENING KIT DETAIL



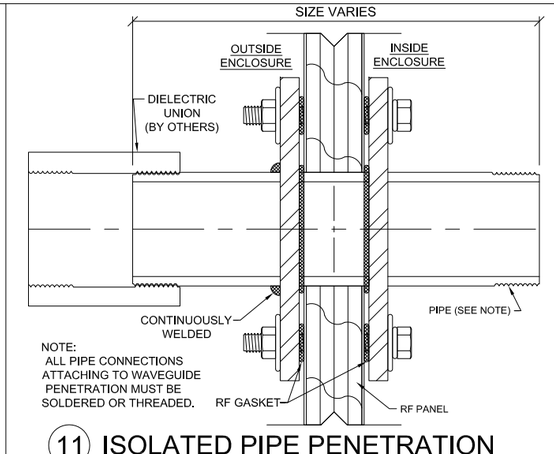
8 ISOLATED CEILING HANGER ASSEMBLY



9 MED-GAS PENETRATION



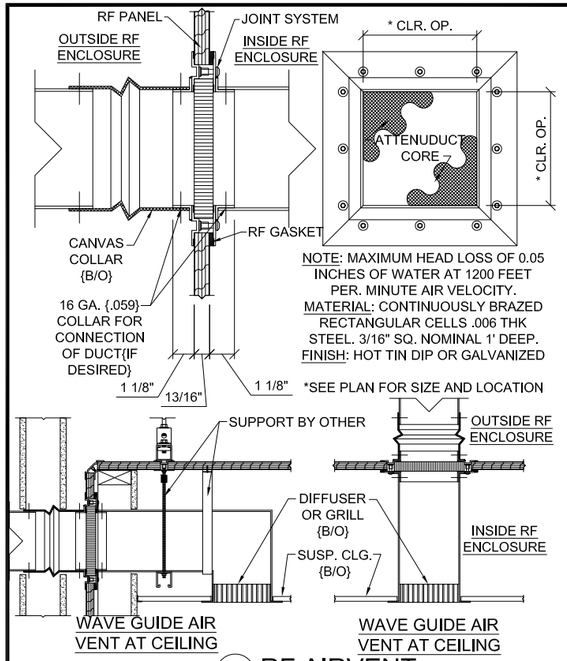
10 GROUND STUD



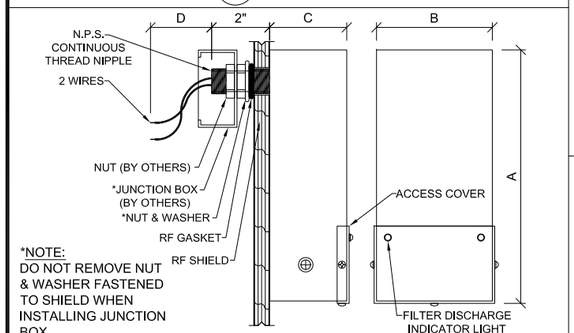
11 ISOLATED PIPE PENETRATION

SHEET 4 OF 6

MATERIAL: -	FINISH: -	HEAT TREAT - WEIGHT -	
MAGNET: GE OPTIMA MR450W 1.5T	TITLE: STANDARD DRAWINGS	UNIVERSAL SHIELDING CORP.	
SCALE: N.T.S.	DRAWN: ALFONSO DATE: -	SIZE: D	DRAWING NUMBER: US-4
REVISED: -	CHECKED: - DATE: -		ISSUE: -
	APPROVED: - DATE: -		



12 RF AIRVENT



RFI/EMI POWER LINE FILTER

INSERTION LOSS 100 dB 14KHz TO 10 GHz PER MIL-STD-220A									
QTY	PART NO	AMPS	VOLTS	Hz	A	B	C	D
-	USC 50-2 X 30	2 X 30	250	0 - 60	20	7	4	12
-	USC 50-2 X 50	2 X 50	250	0 - 60	26	8,25	4,25	12
-	USC 50-2 X 60	2 X 60	250	0 - 60	26	8,25	4,25	12

ELECTRICAL:
CURRENT RATING: THE FILTERS SHALL BE CAPABLE OF WITHSTANDING 140 % OF RATED CURRENT FOR 15 MINUTES WITHOUT ANY DETERIORATION.

INSERTION LOSS: THE FILTERS SHALL PROVIDE THE SPECIFIED INSERTION LOSS OF 100 dB MINIMUM OVER ITS INDICATED FREQUENCY RANGE WHEN MEASURED IN ACCORDANCE WITH THE APPLICABLE MIL-STD-220A BY A GOVERNMENT APPROVED LABORATORY

VOLTAGE: THE FILTERS SHALL BE CAPABLE OF OPERATING CONTINUOUSLY AT FULL RATED VOLTAGE AND OF WITHSTANDING AN INITIAL TEST OF TWICE THE RATED VOLTAGE FOR ONE MINUTE

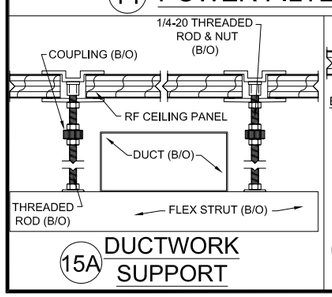
MECHANICAL: CASE: THE FILTER CASE SHALL BE MADE OF COLD ROLLED STEEL

CONSTRUCTION: INPUT AND OUTPUT TERMINALS SHALL BE COMPLETELY ENCLOSED IN RF SHIELDED COMPARTMENTS. COVER ON THE INPUT COMPARTMENT SHALL BE SCREW DOWN TYPE. INTERNAL COMPONENTS SHALL BE MOUNTED AND FIXED TO PREVENT DAMAGE WHEN SUBJECTED TO SHOCK AND VIBRATION TESTS

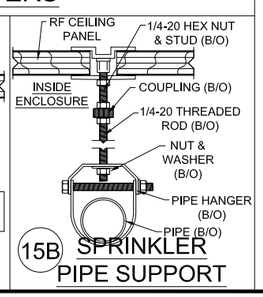
FINISH: ALL FILTER CASES SHALL BE MADE CORROSION RESISTANT WITH IMPREGNANT: THE IMPREGNANT SHALL BE NONFLAMMABLE AS CLASSIFIED SUITABLE PLATING BY UNDERWRITERS LABORATORIES

TERMINALS: THE TERMINALS SHALL BE MADE OF HIGH TEMPERATURE CERAMIC

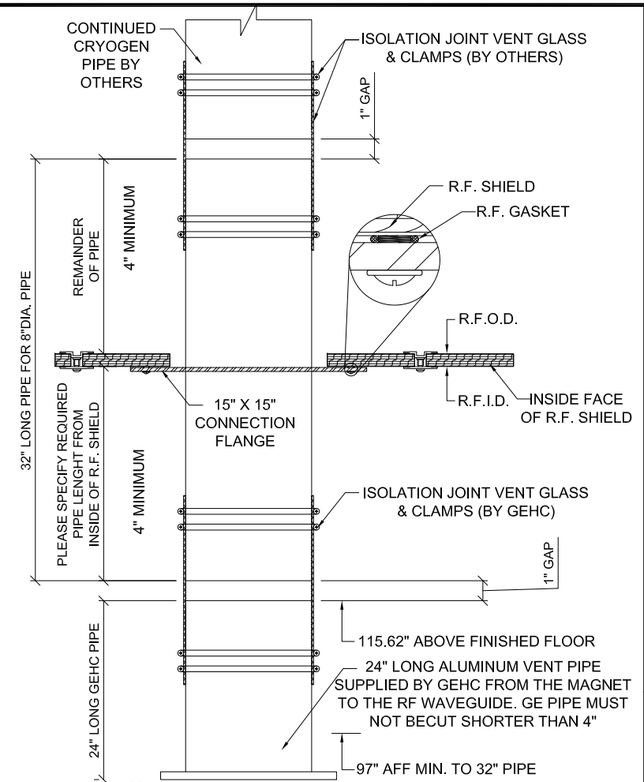
14 POWER FILTERS



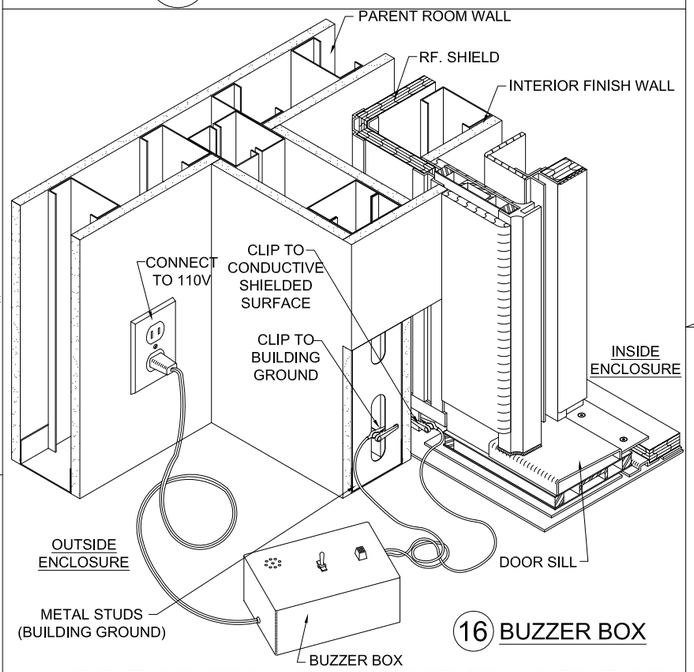
15A DUCTWORK SUPPORT



15B SPRINKLER PIPE SUPPORT

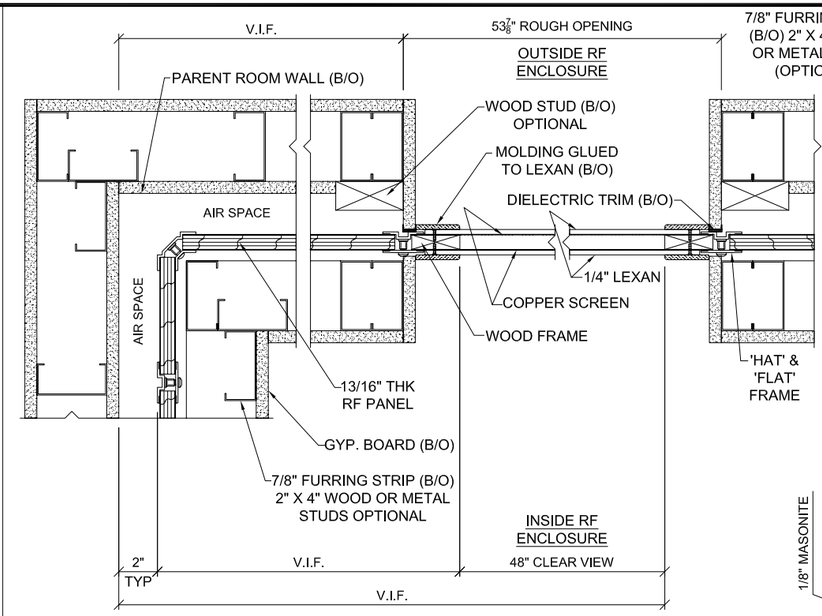


13 R.F. WAVEGUIDE CRYOGEN PIPE

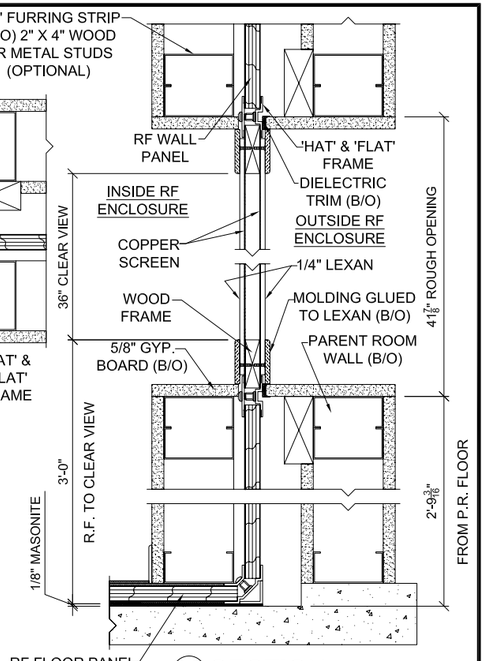


16 BUZZER BOX

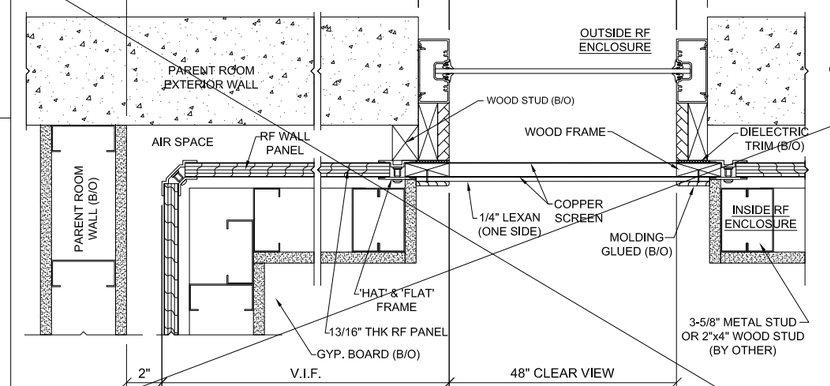
(MUST BE ATTACHED AT BEGINNING OF SHIELD CONSTRUCTION AND KEPT ATTACHED THROUGH TO FINISH AND ACCESSORY INSTALLATION. BOX MUST BE CHECKED AT THE BEGINNING AND END OF THE WORK DAY FOR PROPER FUNCTION (TOUCH CLIPS TOGETHER).



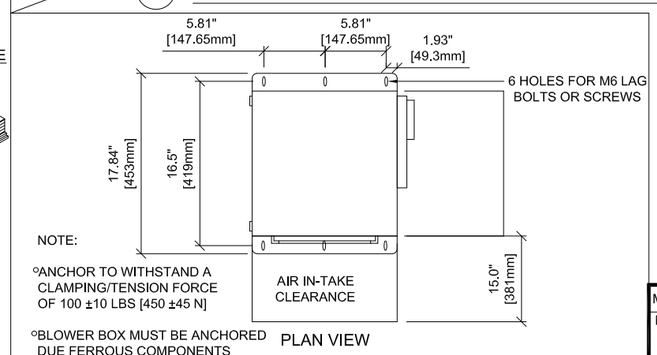
18 INTERIOR MRI RF WINDOW SECTION



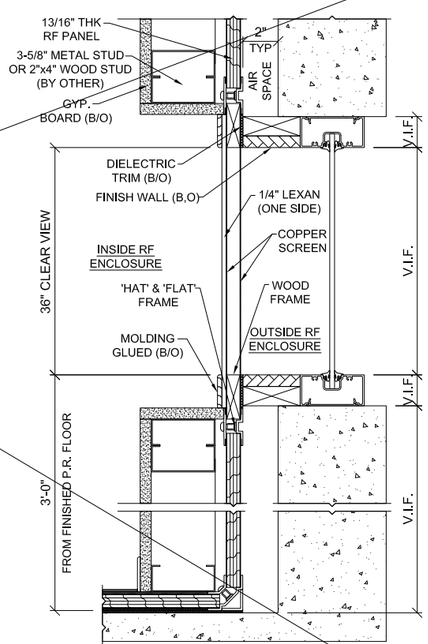
19 SECTION



20 EXTERIOR MRI RF WINDOW SECTION



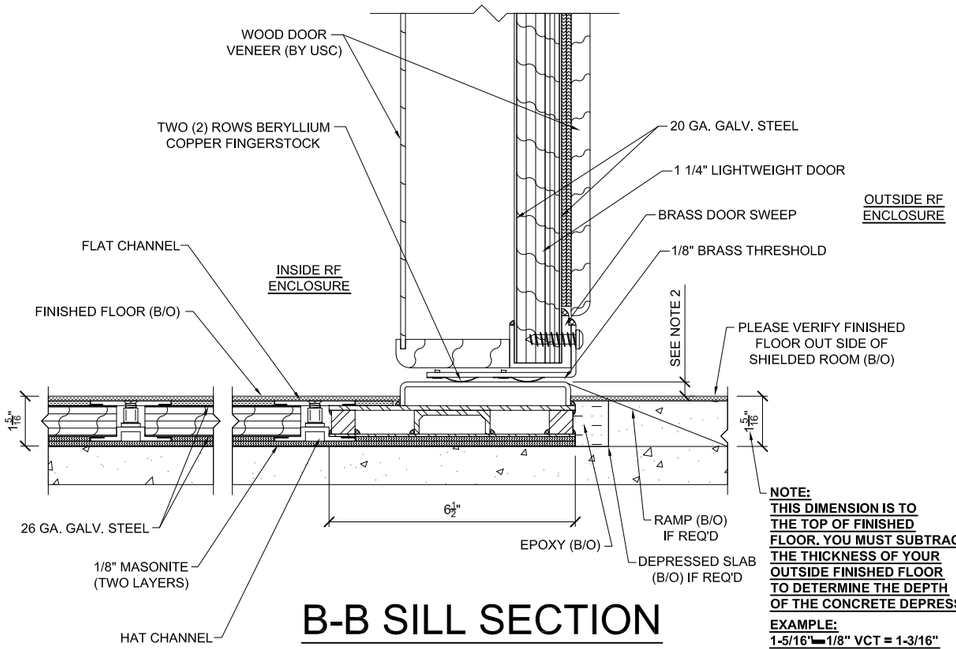
GE BLOWER BOX MOUNTING DETAIL
17 REFERENCE GE DWG. S2, DETAIL M58-15



21 SECTION

SHEET 5 OF 6

MATERIAL: -	FINISH: -	HEAT TREAT - WEIGHT -	
MAGNET: GE OPTIMA MR450W 1.5T	TITLE: STANDARD DRAWINGS	USC UNIVERSAL SHIELDING CORP.	
SCALE: N.T.S.	DRAWN: ALFONSO DATE: -	SIZE	DRAWING NUMBER / ISSUE
REVISED: -	CHECKED: - DATE: -	D	US-5 / -
	APPROVED: - DATE: -		

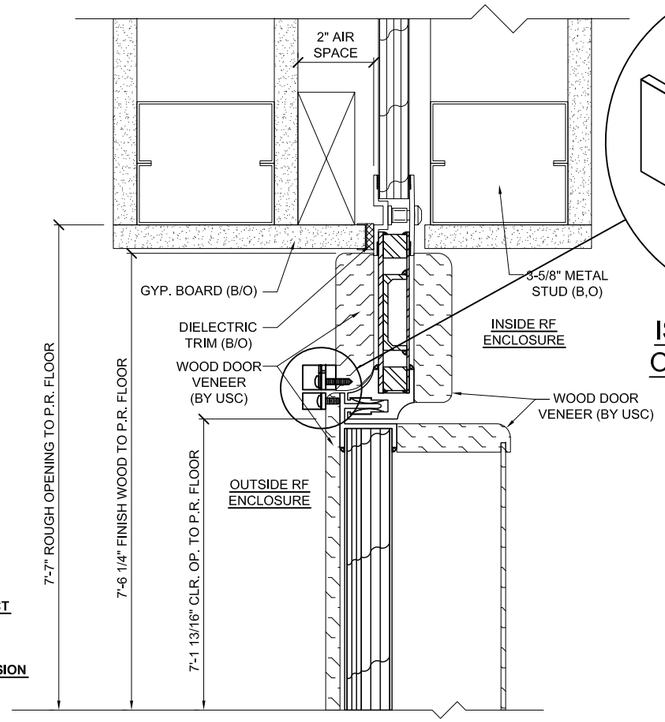


B-B SILL SECTION

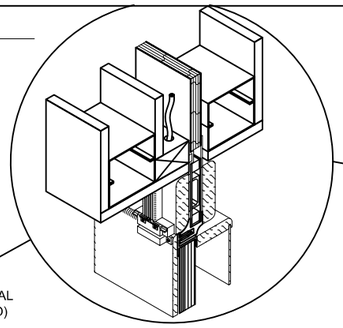
OUTER SWING

NOTE:
THIS DIMENSION IS TO THE TOP OF FINISHED FLOOR. YOU MUST SUBTRACT THE THICKNESS OF YOUR OUTSIDE FINISHED FLOOR TO DETERMINE THE DEPTH OF THE CONCRETE DEPRESSION

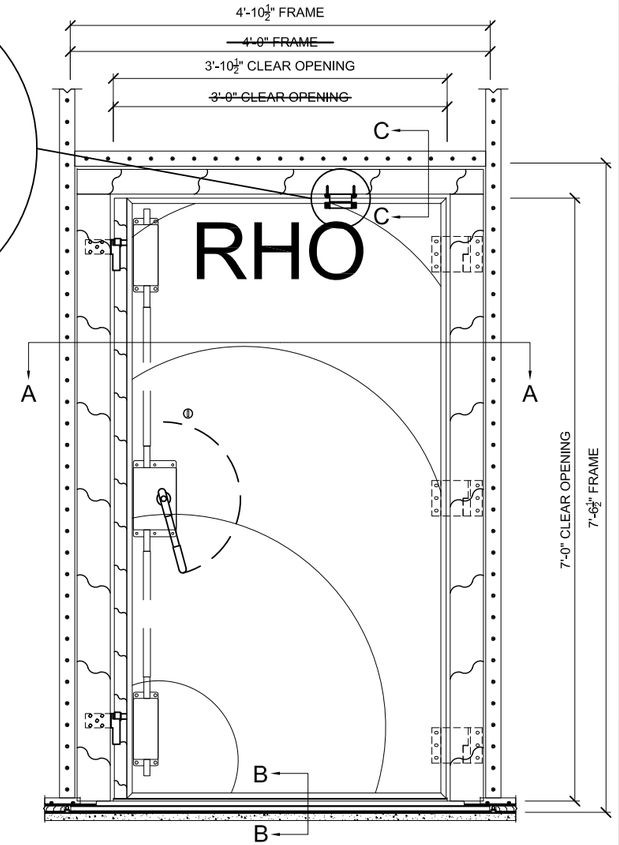
EXAMPLE:
1-5/16"▬1/8" VCT = 1-3/16" CONCRETE DEPRESSION



C-C SILL SECTION



ISOMETRIC VIEW OF DOOR SWITCH



DOOR ELEVATION VIEW FROM INSIDE SHIELDING ROOM

NOTES:
1. OUTER DOOR SWING ONLY

2. 1/4" IS REQUIRED BETWEEN THE TOP OF THE FINISHED FLOOR TO THE TOP OF THE SILL

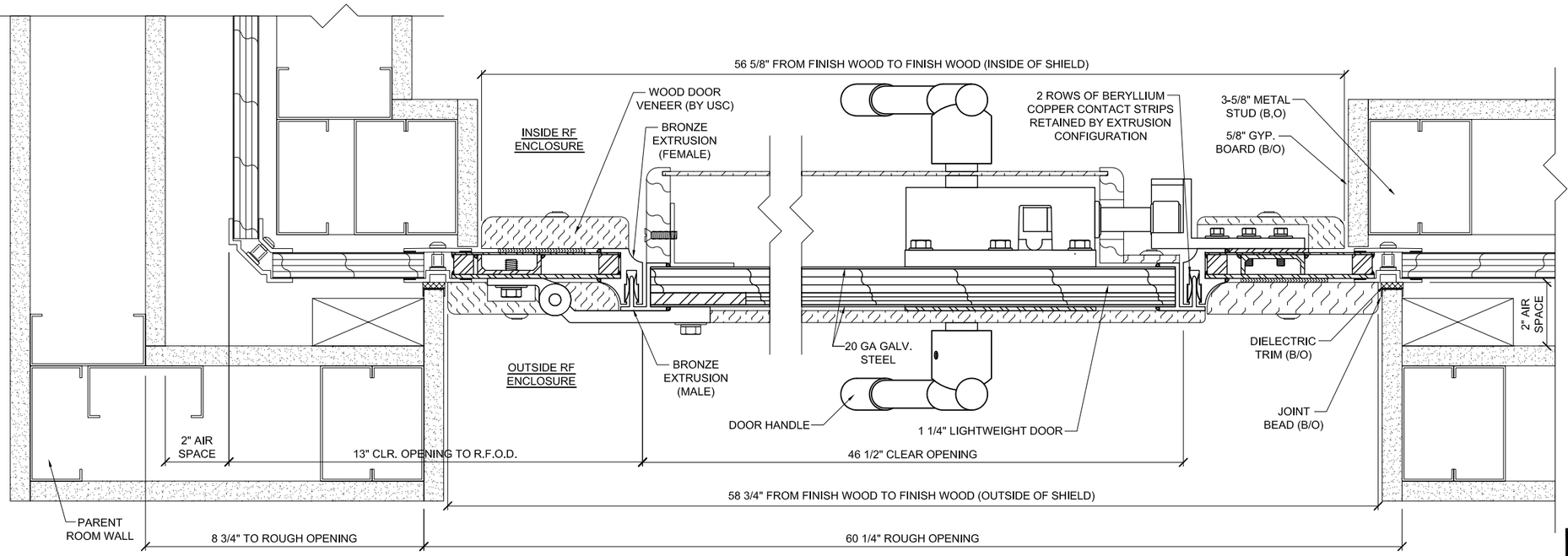
3. SEE SHEET 2 FOR SIZE AND SWING

4. DOOR EXTRUSION IS FACTORY MITERED, WELDED AND SOLDERED CONTINUOUSLY INSIDE AND OUTSIDE

5. RF DOOR IS PROVIDED WITH A MULTIPLE POINT LATCHING MECHANISM

6. RF DOOR IS DESIGNED FOR A FINISHED FLOOR1/8" THICK, IF ADDITIONAL THICKNESS IS REQUIRED, PLEASE NOTE

7. RF DOOR IS PROVIDED WITH UNFINISHED WOOD VENEER. GENERAL CONTRACTOR / CUSTOMERS IS TO STAIN / PAINT DOOR TO MATCH OTHER DOORS IN THE FIELD.



A-A DOOR SECTION

DOOR SECTIONS AND DETAILS

22

RHO

MATERIAL: -	FINISH: -	HEAT TREAT - / WEIGHT -	
MAGNET: GE OPTIMA MR450W 1.5T	TITLE: STANDARD DRAWINGS	UNIVERSAL SHIELDING CORP.	
SCALE: N.T.S.	DRAWN: ALFONSO DATE: -	SIZE: D	DRAWING NUMBER: US-6
REVISED: -	CHECKED: - DATE: -		ISSUE: -
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